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AN EASY, EFFICIENT AND RAPID METHOD OF TEACHING BEGINNERS TO SWIM

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Yes, easy on the instructor and especially easy and pleasant for beginners, especially young children who, with the usual method of teaching, would learn slowly or even refuse to learn. By learning to swim I do not mean learning to swim 50 to 100 yards. I mean to keep afloat in deep water without floating on the back for 15 to 30 minutes. By using the principles and methods outlined in this article the normally strong child of six or seven years of age will learn to swim from five to ten minutes in ten to twelve class or private lessons, the eight or nine year old for 15 to 20 minutes and the child over nine from 30 minutes to one hour. Children four or five years old, those who are weak and timid and a few adults learn more slowly. This statement is made from 25 years experience teaching beginners. During the last 17 years 90 per cent of these beginners ranged between the ages of four and eight with an average age of about six and one half.

Basic Principles

Learning to swim is a matter of solving a rather simple problem of body mechanics and mental adjustments. The solution of this problem is based on developing self confidence and rhythmic coordination. Developing self confidence is a matter of overcoming the fear of sinking. Developing rhythmic coordination of the arms and legs is a matter of training the muscles to react properly in approximately the same manner used in actual practice. Many, many repetitions of the desired movement, constantly trying to avoid as much as possible any false movement, is essential to efficiency. All physical education instructors know and understand this basic principle. I wish to emphasize the importance of this fact in teaching beginners to swim. The instructor has only one almost natural movement to teach the beginner, but due to fear and other influences this movement is not done properly unless the instructor tells the pupil exactly how to do it and insists that his instructions are followed without undue variation. Constant observation and the correction of several common faults during the first two or three lessons will save much time and trouble. Yes, it will be easier on the instructor and more pleasant for the beginner.

Solving the Problem

Solving this problem of teaching beginners to swim as stated above is primarily to

I. Overcome the fear of sinking and to
II. Develop rhythmic coordination.

Overcoming the fear of sinking or developing self confidence aids the development of rhythmic coordination. Rhythmic coordination aids in developing self confidence because as soon as it is learned the pupil can swim. The two go hand in hand but I have found that practice exercises, done separately for each, enable the pupil to learn more rapidly and at the same time these exercises make it easier for the instructor and easier and more pleasant for the beginner. Most instructors have pupils practice exercises which will develop self confidence, but few give beginners *The* exercise which will develop accurate rhythmic coordination of both arms and legs. The practice of this exercise will be discussed under "Teaching the Dog Paddle the Easy Way". Another important fact must be mentioned at this point. Fear, especially the fear of swimming in deep water, which of course is a conscious or subconscious fear of sinking, results from the swimmer's fear that if his head went under or that if water were splashed in his face he would get water in his nose, choke, gasp, swallow water, get panicky and sink. This in fact is what happens in many drownings and leads us directly to

I. *Developing Self Confidence or Overcoming the Fear of Sinking.*

It is assumed that the pupil has confidence in the instructor. This is very important.

A. *Blowing Bubbles.* This is one of the two most important practice exercises. The other is to blow bubbles while dog paddling. Blowing bubbles means to inhale through the mouth and then exhale through the nose into the water. Being so important, all of its phases should be carefully taught. I use the following method with children from four to eight. Some of the details are omitted for older children and adults.

1. *Land Exercises.* Materials used, — a bucket or pan of water on a stool or chair.
   a. Take a breath through the mouth then blow out through the nose five to ten times.
   b. Same—blowing on top of the water in the bucket so as to make ripples.
   c. The same—with the tip of the nose in the water.
   d. The same—with the nostrils in the water. Emphasize—blow hard as though into a handkerchief. Demonstrate this.
   e. Ask the mother (who is usually with the child) if she will spend three minutes a day for one week supervising the child. I usually get a promise.

f. Practice (d) until the pupil can do it ten times without stopping.
g. Do (f) five times resting about three seconds between each series of 10 breaths. This makes a total of 50 breaths. Emphasize a rather long steady exhale and a short inhale. This is very important. Assign the practice of these fifty breaths as regular home work for seven days, or until the child can blow bubbles *correctly* 50 times without stopping.
h. Have pupil repeat (g) to show the mother it takes only three minutes.

2. *Preliminary and Supplementary Water Exercises.*
a. Repeat 1 a to h in the wading pool or in shallow water or standing at the side of the pool.
b. Blow bubbles standing in the water.
c. Blow bubbles bobbing up and down with the head going completely under the water. When in a group, have the children grasp hands and make a circle.
d. Kick holding to the side of the pool or to a railing. Emphasize—splash the water backward with the top of the foot. Also use the flutter board for this.
e. Hold the breath and open the eyes under the water.
f. Float face downward from a push off. First toward a wall or shallow water, then away from the wall. For timid beginners use water wings to start and gradually deflate them on successive trials.
g. Kick as in (d) blowing bubbles.
h. Kick and blow bubbles using the flutter board.
i. Float on the face from a push off and kick legs with the knees practically straight as in the crawl stroke without water wings.
j. Dive for rocks in shallow water.

Note: As the beginner progresses he will naturally blow out through the nose *and* the mouth but for the first few lessons emphasize *IN* through the mouth and *OUT* through the nose only.

II. *Developing Rhythmic Coordination of Arms and Legs.*
A. *The Dog Paddle Blowing Bubbles.*
The dog paddle is a natural movement for practically all animals. It is the simplest and easiest stroke for beginners to learn. After the stroke is mastered while blowing bubbles all other strokes are relatively easy. Blowing bubbles with the dog paddle is *the* important thing. Teaching the dog paddle without teaching the pupil to blow bubbles with it *is the worst kind of swimming instruction,* because no swimmer is safe in deep water unless he can blow bubbles with ease while moving his arms and legs.

B. *Teaching the Dog Paddle the Easy Way.*
1. *Use Water Wings.*
Seventeen years ago, after teaching swimming for eight years without their use, I realized the advantages of using water wings. I have used them ever since and always will. These little wings make teaching easier and more efficient for the instructor; easier and more pleasant for the beginner. My colleagues argue that they hinder the development of self confidence. My point of view is that they aid the development of self confidence because they aid a great deal in the development of a smooth, relaxed, rhythmic stroke which gives the youngsters more confidence in a much shorter time. Anyone can concentrate on a relaxed rhythmic movement much better when he has no fear of sinking. Relaxation and many repetitions are essential. Water wings support the body so the youngster can concentrate on rhythm and relaxation. As soon as the beginner develops a smooth rhythm he will swim. As soon as he learns to relax a little he will swim farther and longer and as soon as he learns to blow bubbles while dog paddling, he will relax completely in deep water because he knows that he can get a breath any time he wishes to do so. When this point is reached he is ready for the crawl and other strokes.

2. *Preliminary Steps for Teaching the Dog Paddle.*
a. *Land Exercises.* First teach the beginner to circle the arms properly while standing out of the water. The hands circle alternately upward directly under the chin, then straight forward and downward. This should be done accurately at least ten times.
b. As (a) standing in the water about waist high. Bend the knees and bend forward slightly *so that the chin touches* the water. Emphasize *keeping the hands under water at all times,* and pulling strongly and smoothly with the hands.
c. Now teach the pupil that the wings will support him and that there is nothing to be afraid of. Sometimes it

is necessary to use 2 or 3 pair of wings to start. Have the pupil lie perfectly still in the water with arms and legs relaxed. It is advisable to hold the pupil's hands at first and gradually release them. After a minute or two the pupil should be ready to—

d. *paddle* with *the wings* using the arms only. Here again emphasize keeping the *hands under the water at all times.*

e. Now add the foot circling movement emphasizing constantly feet *Out*—splashing backward and downward on the water. If this is not done, alternate each width of the pool with the kicking exercise holding to the side of tank, placing hands on the bottom in shallow water or using the flutter board.

3. *The All Important First Strokes.*

a. The first few strokes are most important in order to establish confidence and proper dog paddle form.

b. They must be done slowly, smoothly, and correctly. Don't try to progress too fast. Good form is the most important thing at this stage.

c. Keep constantly in mind the all important principle of starting properly and of making many, many repetitions of this proper start *slowly* until the dog paddle is mastered.

d. As soon as possible have the beginner traverse at least 400 yards each lesson.

4. *How to Use the Water Wings.*

The following procedures aid materially in the use of water wings. Don't start paddling immediately.

a. Teach the beginner that the wings will support him and that there is nothing to be afraid of.

b. While practising the dog paddle keep the wings just above the waist line. Do not let them slip under the arms. This is very important in order to keep the feet close to the surface of the water. If the wings slip under the arms the beginner's feet will sink and he will tend to walk forward and reach for the bottom instead of splashing backward with the top of the foot using a strong ankle movement.

c. In each lesson a distance of from 200 to 400 yards must be traversed. This means paddling from 20 to 40 times across a 30 ft. pool. *Only in this way will rhythmic coordination be developed quickly.* Keep the hands *In* and get the feet *Out*.

d. As a rule don't start blowing bubbles while paddling supported by water wings until the beginner can swim 15 to 30 feet with his head out of water without the wings. See summary for an explanation of this statement.

e. Keep the head *OUT* of water with the chin on the surface. Waves splashing in the face are preliminary to blowing bubbles.

f. Keep the hands *underneath* the water circling upward alternately, directly under the chin and reaching straight forward.

g. *Circle* the feet upward *Out* of the water, then backward and downward splashing the water backward making a distinct put, put, put, sound. Note that the knees bend in order to make a circular movement. They are *not* held practically stiff as in the crawl stroke. Note also that the feet come out of the water.

h. Have the beginner listen to the put, put, sound made by the feet in order to improve the rhythmic movement of both arms and legs.

i. As soon as a smooth rhythmic movement is developed instruct the beginner to deflate the wings gradually by squeezing them against his sides with his elbows.

j. After the beginner can swim 30 ft. easily with the wings ⅓ inflated, practise swimming without the wings toward a wall or in shallow water with the head *Out* of the water.

k. Push off from a wall, float face downward about 10 ft., then come up, take a breath and dog paddle as far as possible with the head *out* of the water.

5. *The Final Steps in the Use of Water Wings.*

After the beginner can push off, float face downward about 10 feet, then came up, take a breath and dog paddle 10 or 15 feet he is ready to start conscientious practice blowing bubbles while dog paddling, supported by the wings *fully inflated.*

The Most Serious Fault to overcome at this stage of learning is to prevent a beginner from holding his breath when his head is under water. Let me repeat that holding the breath is the most im-

portant thing to *avoid* and one of the hardest things to overcome without the use of support. With the use of water wings it becomes a relatively simple accomplishment. I wish to emphasize that at least 400 yards or more must be traversed each lesson just dog paddling and blowing bubbles, in addition to other exercises.

The following procedure will get results quickly and efficiently. It is easy on the instructor; relatively easy and pleasant for the pupil.

a. Demonstrate or have someone demonstrate the proper form both with the use of wings and without them. In this demonstration emphasize the proper procedure (see 2 b to f), smoothness, relaxation, a quick breath in through the mouth, a longer breath out through the nose, keeping the water just at the eyebrow level and a distinct put put put with the feet keeping the hands *under t*he water at all times. This demonstration is important and must be repeated for several lessons.

b. Instruct the beginner to start to practice by blowing out smoothly with only the tip of the nose on the surface. About 200 yards of this is usually sufficient. Emphasize blowing hard and long taking a quick recovery breath.

c. When (b) is mastered insert the nose so that the water reaches the eyebrows. *Watch carefully for the bubbles.* The head must not be lowered too far.

d. See that the beginner does not hold his breath but blows out into the water through his nose only. Inhale with the head raised forward not sideward. *Watch for the bubbles.* This is the important thing.

e. Swim at least 400 yards each lesson using wings. In addition to these 400 yds. practice two other things. One, blowing bubbles 50 times while kicking and holding on to a railing or using a flutter board. Two, push off, coast, take a breath then dog paddle *blowing bubbles* across the pool. Here again I wish to caution the instructor to watch for bubbles. If the child is holding his breath correct this *immediately.* The habit of holding the breath with the head under water is hard to break. Don't let the child start it. Keep this in mind at all times.

f. Practice 400 yards *with the wings fully inflated* until a smooth "blow out" is mastered, then instruct the beginner to gradually deflate the wings. As this is done keep an eye on those bubbles. In addition to these 400 yds. don't forget to have him practice without the wings.

g. During these lessons diving should be taught.

h. Dive and swim 30 to 40 ft. blowing bubbles.

i. Dive from the spring board and swim at least 25 yards blowing bubbles.

6. *The Final Exercises.*

Have the beginner:

a. Bob up and down in *deep* water blowing bubbles.

b. Take a few strokes blowing bubbles then float face down relaxing arms and legs about 3 seconds. Keep at this until he can repeat it five times.

c. Swim in deep water until he can stay afloat for five minutes or longer.

d. Dive from the board and recover an object from a depth of about 8 ft. and continue to swim.

THE APPLICATION OF THE ABOVE MATERIAL

The normally strong child of six or seven years of age will progress as indicated below with either class or private instruction provided the instructor does a good job of teaching.

Lesson I.

a. Teach blowing bubbles. (I, A, 1a-h)
b. Try preliminary water exercises. (I, A, 2a, b, d)
c. Teach thoroughly, "Preliminary Steps for Teaching the Dog Paddle." (II, B 2)
d. Observe carefully the advice given concerning, "The All Important First Strokes." (II, B 3)
e. Follow the advice given in II B 4 a and b, "How to Use Water Wings."

Lesson II.

a. Review as much of Lesson I as is necessary.
b. If ready for them, practice the following supplementary exercises.
   I A 2 (c) Blowing bubbles, bobbing up and down.
   (e) Hold breath and open the eyes under the water.
   (f) Float face down without then with kicking.
c. Supported by the wings make an all out effort to get the pupil to dog paddle smoothly while keeping the hands *under* the water and the feet

out of the water splashing backward and downward on top of the water.

d. Do (c) 400 yds. if at all possible.
e. Don't forget to practice the exercises involving Blowing Bubbles and check on the home work.

Lesson III.

a. Continue working on the material contained in lessons I & II.
b. Observe closely the advice given under "How to Use Water Wings."
c. Practice the following. Push off, coast, take a breath and swim with the head out of water.
d. As (C) blowing out on the coast.
e. Work on blowing bubbles while kicking and holding to the side of the pool, the bottom or the flutter board.
f. Start deflating the water wings if the pupil has progressed far enough.

Lessons IV & V.

a. Continue as in lesson 3.
b. As soon as the pupil can swim 30 to 40 feet with his head out of the water practice the material and observe the advice in II, B, 5, "The Final Steps in the Use of Water Wings."
c. Watch carefully for Bubbles. This is especially important.
d. Take up any other supplementary water exercises which may help.

Lessons VI to X.

Continue with the above exercises until the pupil is ready for "The Final Exercises" listed under II, B, 6.

SUMMARY

All an instructor must do to teach a beginner to swim 15 minutes or longer in deep water is to

I. Overcome the fear of sinking.
II. Develop a smooth rhythmic coordination of the arms and legs in dog paddle fashion while *blowing bubbles.*

The various preliminary and supplementary exercises suggested in this article, the pupils confidence in the instructor and the intelligent use of water wings will help to overcome a fear of sinking.

No instructor should fail to teach blowing bubbles properly. The art of blowing bubbles is fundamental to relaxing in deep water and is paramount to the swimmer's safety. Learning to blow bubbles while swimming in a relaxed manner is very difficult without the help of water wings but it is relatively simple and pleasant with their aid.

The following suggestions will help materially in teaching the pupil a smooth rhythmic coordination of the arms and legs while blowing bubbles.

1. Teach the proper movements slowly and accurately while the body is supported by one or more pair of water wings.
2. Have the pupil repeat these movements many many times supported by the wings until complete relaxation is acquired. At least 400 yds. must be traversed each lesson.
3. While practicing the 400 yd. routine gradually decrease artificial support and also practice the suggested supplementary exercises until the pupil can swim 30 to 40 feet with his *head out of the water.* Swimming at this stage is still a struggle and relaxation can not be expected.
4. *Now is the time to start blowing bubbles while dog paddling.* The artificial support of water wings at this time is very important. Practice carefully, "The Final Steps in the Use of Water Wings." Cover not less than 400 yds. each lesson.
5. Gradually decrease artificial support but keep constantly in mind that the blowing of the bubbles is smooth and regular. As soon as there is any evidence that the breath is being held increase support again.
6. In addition to the 400 yd. routine as practiced in (5) let the pupil try swimming a few strokes with the head held out of the water and then try blowing bubbles once, then twice, etc. Here again note any breath holding. The pupil must exhale *all* of the air into the water.
7. Alternate practice with and without the wings at this time is important in order to overcome the pupil's tendency to hold his breath.
8. Lastly, practice the activities listed under the topic, "The Final Exercises" and then test the swimmer for time.
9. After the beginner can swim 5 to 10 minutes or longer in deep water while Blowing Bubbles he can be taught various water stunts in addition to the side, crawl, breast and back strokes more easily than when Blowing Bubbles has not been thoroughly learned.

SWIMMING—A COOPERATIVE COMMUNITY ENTERPRISE

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To be a proficient swimmer is one of the greatest guarantees the boy in the armed forces can have for returning safely to his home when war is over. Each soldier, sailor or marine who goes into any theater of war faces the possibility of having to swim for his life. Unfortunately it has been found that a rather large percentage of the boys in the armed forces either cannot swim at all or swim so little that they could not survive even a minor emergency. Military authorities have said that the great majority of drowning fatalities in the present war could have been prevented if the men had been able to sustain themselves in water for thirty minutes.

Both the Army and the Navy are placing much emphasis on swimming in their training programs. Of course, this takes extra time and it means that the training period is prolonged. Much is being done now through the high school programs to prepare teen age boys for the war activities most of them are bound to face. One of the most important contributions the high school physical education program can make is to provide an opportunity for every boy to master the skills of swimming.

In those schools which have adequate swimming facilities this can be done easily. Most high schools throughout the nation do not have swimming pools; therefore, it is not an easy matter to provide for a satisfactory swimming program. However, because of the very great importance of swimming as a safeguard in modern warfare, physical education directors and school administrators should exhaust every means possible to establish a swimming program which will guarantee each boy an opportunity to learn to swim.

For those schools having no swimming pools, the problems will differ according to the facilities which exist in their communities. In many cities and towns the Y.M.C.A. or the Y.W.C.A. will have a pool which can usually be made available to the schools. In many communities out-of-door pools or nearby bodies of water will be the only means available. Whichever the case may be, some arrangement should be made to meet this essential need.

A swimming program for twelfth grade boys of the three high schools in New Rochelle, New York, was recently completed with great success. None of these schools has a swimming pool, but arrangements were made with the Huguenot Y.M.C.A. for the use of their facilities. An agreement entered into between the Y.M.C.A. Director of Physical Education and the schools' Director of Health and Physical Education provided for the use of the "Y" facilities for the purpose of administering this program. This agreement was enthusiastically endorsed by the Superintendent of Schools, the Board of Education and the Board of Directors of the Y.M.C.A. Aside from a nominal rental fee paid by the Board of Education to the Y.M.C.A., no other expenses were incurred by the schools. The Y.M.C.A. offered this generous arrangement as one of their many contributions to the war effort and community service.

The details for the procedure to be followed in conducting the program were worked out in a round-table discussion with high school principals, the men's physical education staff and the Y.M.C.A. Director of Physical Education.

Cognizant of the vital importance that swimming holds for every boy in the armed forces, the Principals were most willing that the program should be conducted during the regular school day so that a hundred percent attendance could be assured. This meant, of course, that the boys would have to be excused from some of their academic classes whenever their swimming assignments were scheduled.

The responsibilities of the respective institutions for the program may be summarized as follows:
Y.M.C.A.:

1. Provision of all facilities including shower and locker rooms.
2. Provision for supervision of these facilities.
3. Provision for the safe deposit of all pupils' valuables.
4. Provision for supervision of instruction under the Director of Physical Education of the Y.M.C.A.
5. Design, print and issue achievement cards awarded to boys who completed the test.
6. Work jointly with the schools' health and physical education staff in devising a satisfactory test.
7. Work jointly with the schools in regard to publicity for the program.

8. Provision of individual record forms to determine achievement.

SCHOOLS:

1. Prepare all boys in advance by discussing the plans and purpose of the program.
2. Arrange for dismissal and readmittance procedures.
3. Assign one instructor from each school to assist in conducting the tests and to help in swimming instruction.
4. Check the health record of each boy before admitting him to the pool.
5. Work jointly with the Y.M.C.A. in devising a satisfactory test.
6. Work jointly with the Y.M.C.A. in regard to publicity for the program.

Beginning February 23, 1943 and continuing for seven days, each high school senior and each boy who will become of draft age by September 1943 was given the following test:

1. Jump or dive in deep end of pool.
2. Float thirty seconds.
3. Tread water thirty seconds.
4. Bobbing fifteen times.
5. Swim fifty yards (two lengths).
6. From deep end swim twenty yards, float on back for fifteen seconds, rest and return to starting point.

Each test item followed the preceding one with no time out allowed for a rest. Those who failed to pass one or more items of the initial test were requested to report for swimming instruction which was carried on during a four-week period. These instruction periods were scheduled twice weekly during the regular school day (9:00 A.M. to 10:00 A.M. and 11:15 A.M. to 12:15 P.M.).

During the course a total of 596 lessons were given. This is an average of 4.3 lessons per boy. A large percentage were able to pass the test within half the time of the full training period, and were excused from further instruction.

At the time of the initial test, in addition to water safety instruction, various swimming skills were taught to those who readily passed the test. The following figures are indicative of the success of this project:

Number tested	289
Number who passed initial test	151
Number passed on subsequent tests following training period	66
Number who learned to swim but did not meet test requirements	60
Number left school or excused by a physician	12

Because of the central location of the Y.M.C.A. no transportation was provided for the boys. Sufficient time was allowed in the schedule to permit them to walk to and from the Y.M.C.A. The greatest one-way distance any group had to walk was a mile and a half while the shortest distance was three-quarters of a mile. The enthusiasm and sincere interest of the boys eliminated any problems of attendance or tardiness. All of them readily developed a keen understanding of the need for this training, and their attitudes were indicative of the seriousness with which they went about the task of learning their skills.

The officials of the Y.M.C.A. and the Public Schools regard the success of this program as one of the most worthwhile contributions their physical educations programs have made to the war effort. Furthermore, it has stimulated interest among pupils, teachers and parents for an expansion of this program to include both boys and girls. Soon after this program was completed the Huguenot Y.M.C.A. sponsored a city-wide learn-to-swim campaign for boys and girls of the fifth, sixth and seventh grades. This was carried on during the Easter vacation period of seven days, and concluded with a parents' night program at which certificates were awarded.

Because of the successful results realized in these cooperative programs, it is indicated that much more extensive swimming opportunities will be offered all boys and girls during the 1943-44 school year. It is intended that this program shall include instruction in a wide variety of aquatic skills which will lead to qualifications for life-saving certificates.

FEAR AND COURAGE

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Fear is an inborn emotional response common to all normal human beings. When uncontrolled, however, it becomes the fifth columnist that undermines and brings about the destruction of man. Controlled fear is your greatest asset on the battlefield.

When you become frightened, all normal life processes are altered. Digestion tends to stop. The arteries of the abdomen contract. The heart beats more rapidly. The blood pressure rises. Breathing becomes deeper and more rapid. The adrenal glands become active, pouring adrenalin into the blood, further diminishing the normal activities of the digestive system, and increasing the strength of the voluntary muscular system. The liver increases the fuel supply of the body by turning loose stored-up sugar. Into the blood stream is discharged a

substance (supposedly by the liver or the adrenal glands) which makes it coagulate more easily and thus reduces the chances of bleeding to death in the case of injury. Men have been literally shot to pieces on the battlefield without bleeding to death.

The sweat glands become more active and allow heat to escape from the body. The tiny muscles around the roots of the hair of the body contract, causing the hair to bristle and the skin to have a tickling sensation. The salivary glands cease functioning, and the mouth becomes dry. The face becomes pale; the body begins to tremble.

These bodily reactions, which you feel and are in themselves frightening to some people, are in reality protective devices. Originally they had three purposes: to give man superhuman strength to fight for his life; to allow man to escape from his enemy by remaining perfectly still and thereby avoiding detection; and to give man superhuman strength to run for his life. Except in war these three responses lose much of their original value in modern civilization.

The fear reaction sets in when we do dangerous things and when we attempt to do things we are not in the habit of doing. The experienced movie actor would likely have an attack of "mike" fright at his first appearance on the radio. The all-American football player who had never played baseball would experience a very acute sensation of fear if he attempted to bat against a big-league pitcher. Likewise the big-league player would hesitate to tackle the all-American back. A champion boxer who had never taken part in gymnastics would have to force himself to do some of the simple flips and rolls executed by the gymnast. The housewife or business man who is capable of carrying on a fluent conversation with friends as individuals discover that the tongue becomes paralyzed, the knees tremble, and the mind tends to go blank when friends are addressed in such a collective group as the Missionary Society, the Junior League, the Rotary Club, or the Chamber of Commerce. All of the heroes of the present war, moreover, admit that they were frightened as they went into battle.

Courage, an Acquired Reaction

To avoid detrimental results of fear, you must develop courage. Courage is the controlling of fear and the carrying out of your duties in the face of recognized danger. It is an acquired characteristic. A foolhardy person incapable of recognizing danger is not courageous. The adage that "fools rush in where angels fear to tread" adequately describes those who lack judgment and appreciation of danger.

Fanaticism and hatred are substitutes for courage. In war, as in many other activities, the substitute can be as valuable as the original product. Courage is the weapon of democracy. Fanaticism and hatred are totalitarian weapons. We should make every effort to win with our democratic virtues. However, if we do not have time to use our methods (democratic processes tend to be slow), we should not hesitate to unleash the energy that results from hatred and fanaticism.

Physical courage is required to face physical danger. For self-discipline and the fulfillment of obligations to society, one needs moral courage, the lack of which would probably not be noticed.

Prerequisites of Courage

Man has never been able to stand alone. He is frightened at his own weakness and impotence. He must have some outside source to furnish him strength and direction in life. All peoples throughout the ages have turned to the supernatural and have worshipped every conceivable material and spiritual object. Fanaticism, hatred, love of money, love of power, and vocation have been defied by man. As one studies nature and science, he becomes aware that there is a plan of life, necessitating a planner. This planner, whom we call God, is the greatest outside source of strength, courage, and inspiration to which man can turn. It is impossible to overlook the value of belief in God to help man in overcoming his fear. All other factors of environment and heredity being equal, the person believing in God is more courageous than the agnostic or infidel. Security, which is essential to courage and which man so frequently is unable to create for himself, comes with belief in God.

There is a close correlation between courage and good physical condition. The person who allows his body to get into poor physical condition from any cause decreases his ability to control fear. The morale of a football team or an army fluctuates according to the physical condition of the individuals making up the group. The well-conditioned individual or group can stand up under tremendous punishment and can continue to perform on a high level of efficiency in the face of bad breaks and defeat. The poorly conditioned group becomes panic-stricken in the face of bad breaks, thus hastening and insuring complete defeat of its cause.

"Know the truth, and the truth shall make you free." A knowledge of fear will help give you the ability to control the emotion. As you come to understand it, you recognize that fear—with its icy, sinking feeling in the pit of the stomach, rapidly beating heart, trembling knees, and wild desire to escape is beneficial rather than harmful. The reactions you feel mean that your body is preparing to do a better job than it ordinarily could do. As you understand this, you begin to gain control of the most destructive of all fears—the fear of fear itself. Fear is basically the same thing, whether it be stage fright, mike fright, fear on the battlefield, or fear of social or business failure. The less prep-

aration we have for the job, the greater the fear. Nature is not to blame when she tries to make up for our neglect. If we are prepared to do the job, the fear reaction produces a more or less pleasant and satisfying tingling sensation of anticipation.

Conclusion

We shall always have cowards because nature has seen fit to give individuals varying ability to control fear, just as it has given them unequal powers to run, jump, sing, talk, and think. It should be pointed out that because a man is courageous on the athletic field or in business, we may not safely conclude that he will be courageous on the battlefield. Likewise, the fact that a man has had no experience to afford him the opportunity to develop courage will not prevent him from becoming a hero on the battlefield. Since courage is an acquired or developed characteristic, it cannot be denied that every individual may be trained to face all situations of life more courageously than at present. As you learn more about fear and courage and understand that fear enables you to do a better job and increases your chances of remaining alive, you can be taught and can of your own accord begin to adopt a more courageous line of action in all situations.

EDUCATION IN WAR*

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In discussing the subject, "Education in War," from the standpoint of the Army, it has been suggested that I deal with the problem from two points of view:

1. What are the problems facing young men inducted into the Army?
2. What can the schools and colleges contribute to better equip draftees and the Army to meet such problems?

The answers suggested to those questions are the observations and personal opinion of the speaker.

Upon being inducted into the Army a draftee first reports to an induction center. There he is herded from place to place and wanders in nakedness and bewilderment through what appears to him to be miles of physical examination. He learns to look upon privacy and individuality as things left behind in a golden civilian society. He will have been inoculated against practically all the ills to which his human flesh is heir. He will then be issued complete uniform and equipment and transferred to a replacement training center. There he undergoes a cycle of basic training covering a period of approximately thirteen weeks. There he learns foot drill, the nomenclature of the rifle and the manual of arms; he becomes acquainted with military discipline and the intricacies of military courtesy. He will learn how to roll a pack and carry it on long marches; how to undergo physical training more strenuous than that to which he has been previously accustomed. He soon realizes he must be in condition to march 4 miles in 45 minutes with full field equipment, 5 miles in one hour, 9 miles in two hours, 16 miles in four hours, 25 miles in eight hours and march at double time for seven miles without a halt; he will go through the obstacle course, practice with his bayonet, learn sanitation and first-aid, how to prevent and control communicable and venereal diseases, how to administer first-aid and treat wounds; he will haul groceries, and empty cans and ashes, he will unpack rifles buried in cosmoline (grease), he will stand guard, mop floors and wait on tables. Most of this at first will impress him as utterly useless. He will begin to feel sorry for himself and then get mad as hell, but at the end he will like it. He will have found himself. All this is part of the big task of transforming a civilian into a soldier. For practical advice to give a draftee being inducted into the service there is none better than the golden rule of the Army: "Keep your eyes open and your mouth shut."

A draftee spends approximately three days at the reception center being processed and classified. He is given what are known as information and ability tests, covering vocabulary, mathematics (simple arithmetic), and multiple choice questions covering subjects generally. Every man also is given a mechanical aptitude test. Oral trade tests are likewise given to determine those who are skilled or semi-skilled. Our modern Army is a cross-section of our specialized mechanized civilization and it rates occupational skills even higher than in civil life.

In addition to these tests, each draftee undergoes a personal interview by personnel trained for that purpose. The temperament and ability of the new soldier is recorded and classified along with his hobby interests. Skilled or semi-skilled specialists are needed for no less than 265 different trades. The largest demands are for clerks, typists, cooks, mechanics, engineers, chemists, physicists (those specializing in electronics), radio operators and repairmen, electricians, telephone and telegraph repairmen, surveyors and instrument men.

To understand the Army's need, examine a unit such as the Air Corps. To keep each plane in the

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air, I am informed, it takes approximately fifteen men on the ground. Among the specialists are included mechanics, electricians, metal workers, photographers, weather observers, parachute riggers, and bombsight maintenance men.

Every draftee will get basic military training and much more besides. Those who already have a trade useful to the Army are retained in that trade. A telephone lineman already knows how to maintain lines with good poles and elaborate equipment. In the Army he'll learn how to string lines across open country with few tools and practically no equipment.

Some technicians are developed by daily field practice under an expert's supervision; others are put through special clerical courses in Company Administration—the Quartermaster School—the Air Corps Technical Schools—and so on.

So much for the draftee's problems. Now let us turn to your jobs as educators of these boys. I am not going to mince words but I am going to speak frankly—and I feel you want me to do just that.

WE ARE AT WAR. There are some of you who probably don't realize that yet. You want to help, but you say you don't know how. When I have discussed subjects with educators and administrative heads that I think should be placed in the curriculum, or subjects such as physical education, that should receive greater stress and be considered of greater importance in the curriculum of studies, I am told that they can't give any more credit for that subject, or that the subject doesn't count toward graduation. In fact, many educators spend too much time talking about what they want to do for the war effort, but fail to act when recommendations are suggested.

It may be that you will have to give courses that heretofore have not been given, and give more academic credit to subjects not previously considered important. But whatever is done, is going to have to be done in a hurry, or education will catch up with this War after it is over.

In decentralized training in the Army, it is our principle to tell our junior officers what we want done and not how to do it. Therefore, the Army has no definite program to distribute, but as educators you can see our problems. I believe much of your educational system must be revitalized and geared for a nation at War.

The first subject that I wish to mention this afternoon is mechanical training. The last war impressed us with the same deficiency we are experiencing now. After that war was over and until about 1925, mechanical training was emphasized in our schools. Then for a period of about fifteen years training in the mechanical arts and sciences was overshadowed by the more academic studies. Hence, the dearth we are facing at the present time.

The need today for those in skilled and semi-skilled trades is much greater than in the last war. This is due to the mechanical progress we have made, not only in aviation and signal communications, but in every other branch of the service. Our modern armies are mechanized. We are mobile. If our engines break down we must have mechanics to fix them. We are entirely dependent on skilled mechanics and technicians, for without them we can have no mobility on land or in the air. The Army needs about 2½ times the number of mechanics it is getting. General all around mechanical training is acceptable.

Another pre-induction contribution that education can render those entering the armed forces, is to get them in the correct mental attitude. I was told that a recent survey shows that of the men inducted into the Army, about 25 per cent want to fight, 25 per cent do not want to fight, and about 50 per cent are indifferent.

It is easy to train men who are eager and ready to serve because they are willing to learn and to co-operate. On the contrary, men who are indifferent, men who do not care, men who don't appreciate the value of freedom in all its forms, men who have to be convinced that everything that is being done is for the best under existing circumstances, are the types that hinder our training and slow up the entire war effort.

Therefore, as a concrete suggestion, all of our youth should be schooled in those subjects that would engender in them a wholehearted desire to contribute their all for the benefit of their country. It shouldn't be necessary to show them individually that they are going to have to co-operate, or that after they have been in the army for a while they will want to co-operate of their own accord, or that if they will co-operate and become efficient their advancement will be rapid.

Again, I am as mindful as you are that we didn't want this War, but—WE ARE AT WAR. I sometimes wonder about the patriotism of some of our youth. Why are so many anxious to get in defense industries and have someone else do the fighting for them? In my opinion, it is not that they are not patriotic, but rather they don't realize their full measure of responsibility. They don't realize the seriousness of the threat of the Axis countries to their life, liberty and property as they have enjoyed it under a republican form of government. How can this background be taught in the high schools and colleges? Teach more American History, instill more patriotism, include a course showing the successive conquest of agressor nations, teach more of American institutions, teach them what we are fighting for, have more discipline in your schools, and let there be less coddling.

If these suggestions are followed, a far greater percentage of draftees will come into the Army with a correct mental attitude, and immediately we can proceed to make fine soldiers of them.

In addition to the subjects I have just suggested, I wish to mention certain others that would be of material benefit generally.

Most important is more mathematics, physics and chemistry. Many people are under the curious delusion that since calculations in modern warfare are often made by instruments (e.g. range finders) a soldier need not know mathematics. Actually, a knowledge of mathematics is useful in tending a machine gun, and to use a military instrument intelligently, a soldier needs to know the principles on which it works.

With the tremendous expansion which our army is undergoing, the necessity for leadership is all important. The basic element of leadership is character and this cannot be improvised or developed in a short time. The influence of the leader is transmitted to his men by his manner and by his actions; these are controlled by his knowledge of men. Therefore, courses along the line of the "psychology of leadership," "man management," or whatever title you prefer to adopt, would be of tremendous importance.

Many of the subjects I am suggesting you may now be teaching. If so, it is suggested that because of their importance their scope be enlarged and more credit be given. I believe that in all instances the subjects referred to are of such a practical educational nature that they will be of inestimable value to our youth even after they are out of the Army. For instance, most high schools and colleges give some course in hygiene and sanitation, but what does it amount to? Perhaps all entering freshmen have two or three hours lecture on the subject. Do all graduates of our high schools and colleges know something of the anatomy and physiology of the body? Or do just a few that have majored in the subject or in those subjects closely related? Do they know anything about treating wounds, shock, artificial respiration, injuries due to heat and cold, snakebites, or blisters on their feet?

In the Army the professional care of the sick or injured is the responsibility of the Medical Corps. In battle we have attendants referred to as "Corps Men," for the sick and wounded as well as facilities for the evacuation and hospitalization of the soldiers. But the time might come when these Corps Men might be killed or missing, or the facilities lacking. Every soldier carries a first-aid packet and has been taught how to use it. The rudimentary training he receives in this important subject may mean his life or the life of a companion.

The almost complete absence of any correct knowledge of sanitation, hygiene, and first-aid in the minds of the great majority of draftees compels me to come to the conclusion that much more could be done by our educational institutions in this connection, thus it would allow the army to spend more time in rifle marksmanship and other more technical military subjects.

I know the subject of physical fitness is the subject uppermost in your minds this afternoon. However, I could not discuss that subject as a function of education in war without mentioning those subjects to which I have already referred.

Turning, therefore, to the subject of physical education. I feel that the building of strong bodies is one of the greatest services education can render the youth of our nation and to the army. I don't need to recall to you the elaborate physical training program European countries have been giving to their youth for several years in preparation for this war. It goes back to the old Greek and Roman theories of a sound mind in a sound body. We have been attempting to train sound minds, but have not given enough attention to developing sound bodies. I think the theories of education propounded by Plato, Locke, Comenius, Pestalozzi, Thorndike, and many others will bear me out. Educators encourage interscholastic contests, but more intramural sports should be stressed wherein a greater number of the students participate. We concentrate on the bodies of a few on the football and other athletic teams and the general rank and file that need the training most remain untrained. There is a certain phase of army training in time of war that we do not like to discuss. Since, however, I am endeavoring to impress you with the importance of a soldier being in sound physical condition, you must be reminded of one further fact. In war you must kill. We don't like to kill and we don't like war. We didn't want this war, but regardless of what you and I think, we are now engaged and the struggle is for survival, kill or be killed. Our enemies are past-masters at killing. The training of Japanese soldiers is comparable to the thoroughness of the training of Germans. The Jap is a hard, relentless fighter—a killer. He is treacherous and has no fear of death. His speed on foot in the jungle terrain is remarkable. His ability to fight hand to hand is the result of long training and conditioning. Since, therefore, killing is the object of our efforts, the sooner we get in the killing mood, the better, and the one positive method of killing is hand to hand fighting. In jungle warfare, especially, there is a great deal of work in hand-to-hand individual combat, use of jungle knives with twelve inch blades, and the jujitsu. If our boys are weak physically, they cannot fight against the use of knives or knock bayonets out of the hands of their adversaries which will mean certain death.

The physical condition of new draftees is poor. The large number of men in our replacement training centers that come in puffing and snorting after a short march, that can't jump over a hurdle two feet high, and that haven't the strength to pull themselves over a fence seven feet high is appalling.

The youth of the Axis countries are physically fit before they get in the Army, but in this country we have to get them into condition before we can make them good soldiers, and that slows us up.

Physical training must be progressive, systematic, and carefully supervised. Serious injuries may result if unreasonable physical demands are made of unconditioned troops, especially those below the physical standard of the average. It is this all-around physical condition of the average that is so important, and not the specialty of a man in one certain field of activity. For example, at U.C.L.A., where I am stationed, we have a track man that can run 100 yards in ten flat, but when tested for all-around condition we found he couldn't climb a 15-foot rope or swim ten strokes. The day might come when he might have to jump from a boat and swim to save his life, or climb a rope on the side of a ship to escape burning oil. The physical training that you can give a boy might be the very thing that will save his life. Eddie Rickenbacker, at the age of 52, and the six others that were with him on a rubber raft for 21 days with little food, never could have survived had they not been in excellent physical condition.

The greatest contribution you as educators can make to the war effort and to every boy entering the service, is to graduate him from your institutions of learning, sound in body as well as sound in mind.

The Army wants skill, endurance, and conditioning, and that should be taking place right now, especially in our junior high schools, high schools, and junior colleges, where they have the bulk of the 15, 16, and 17-year-old students. Some of you will ask me—What specific things do you want us to teach in physical education? My answer to that question is this: Call in your physical education instructors and have them prepare a program of activity that will include skill, endurance, and conditioning. Then, as administrators, you should back them up with the time and facilities to carry out their programs.

The thought is probably running through the minds of some of my listeners that there is not sufficient money in your budgets to allow for such enlargement or the adoption of the courses suggested by me. Also, the thought that you do not have enough competent instructors to teach so much physical education or first-aid, sanitation and hygiene, for example. The answer to the first part of that thought is to immediately abolish courses that many of your institutions are now giving, such as dance fundamentals, archery, social dancing, golf, art appreciation, and kindred subjects.

In answer to the thought regarding lack of instructors, I'll tell you how we take care of that problem in the Army. We don't talk about it. We immediately train a sufficient number of instructors. In physical education, for instance, why not allow the basic instruction to be taught by your senior physical education majors? That can be done under the decentralized method of teaching with proper supervision. At the same time, give a special course to your seniors on the "Methods of Instruction." You, thus have a two-fold accomplishment—you are putting over your instruction and you are training and qualifying your seniors as leaders and instructors by special theoretical instruction and practical teaching.

I trust that my remarks may have been of some help, or at least of some interest, to your conference. If the need of solidarity of effort ever existed, it exists today. To insure for our men a reasonable start in the army and life to come, is worth any cost and any effort each of us is capable of expending.

RHYTHMICS IN THE JUNIOR HIGH SCHOOL PROGRAM*

GWENDOLENE SPENCER
Monticello, Indiana

Before the writer went into the girls' physical education department at Monticello, there had been very little rhythmics taught there. Much has been added on the belief that rhythmics makes an important contribution to the curriculum since it provides fun for both teacher and pupils, develops a much-needed sense of rhythm, socializes the class, coordinates muscular action and permits scope for imagination and intellect.

Because the right kind of music is very important in any kind of rhythmic program, we turned to the use of the portable victrola and folk-dance records. There was a piano available but it was difficult to find a pianist with good timing. However, the victrola was not loud enough to carry the music to both ends of the gymnasium, unless everyone remained quiet while executing the dance. Now it really isn't any fun to enter into these festive folk dances if one has to remain quiet. It was suggested to the principal that we purchase a small broadcasting set advertised in the catalogue of a mail order house. He is turn suggested that the school purchase a small combination radio and victrola. This has proved to be a very satisfactory piece of equipment. Although there is no speed control there is a volume control and by careful selection of records, we carry on our work with satisfaction

* By permission *The Newsletter*, Indiana Association for Health, Physical Education and Recreation, April, 1943.

for all. We have danced such dances as Virginia Reel, Gustaf's Skoal, Bleking, Highland Scottische, Highland Fling, Irish Lilt, etc.

One of our first public programs was a folk dance exhibition between halves of a basketball game. However, the first real success rhythmics had in our classroom came about as a result of receiving the record "Mystery of Night." The question of costuming became paramount. The music and composition required something very light and filmy. Georgette and chiffon being too expensive, we resorted to cheesecloth, circular skirts opened in front, and scarfs of cheesecloth, trimmed in silver stars were worn over white shorts and triangles. A blue and silver ribbon was tied about the neck and head, making the costume complete. A blue spotlight placed on the dancers dressed in the above costumes presented a very fantastic sight. Believe it or not, as subtle a dance as this exhibited before a group of basketball fans held them spellbound.

From that time on the attitude of the girls changed toward any kind of rhythmics. The day after the performance, the writer found all types of dancers in her classes. Rhythmics seems to be the answer to that desire of every girl to step out of everyday life into a new role.

The following year, twenty of the eighth grade girls gave a rhythmic exhibition to "The Blue Danube Waltz." The entry was a waltz with turns and corresponding arm movements in revue fashion. Dancers doing cartwheels and backbends, and baton twirlers executed their stunts to the music as the chorus went through its routine.

This year our grade and junior high physical education department gave a "gym" carnival. The girls gave rhythmics. The ninth year girls presented two numbers, one involving twenty-one girls in a military march to "The Marines' Hymn" and "The Director" (operated with two victrolas), the other an interpretation of wounded soldiers' visions of "White Xmas" back home. The eighth graders gave a gypsy scene in which they used all sorts of tumbling stunts around the campfire and some of their rhythms—the "Hic Polka," "Put Your Little Foot Out," etc. We used this setting because costuming could be secured individually from the home wardrobe. The seventh graders were a little downhearted because they gave just a folk dance.

At Open House, which was held May 4, one group of ninth graders gave "Melody in F," while another group gave "A Bicycle Built for Two." The eighth grade gave a tumbling and rhythmical sketch to "The Old Time Waltz Medley." The seventh graders presented a military march (due to admiration for the ninth grade's number), waltzes, "Maytime" and "Wedding of the Bells."

How are records obtained? Some have been loaned, others given, some are the personal possession of the instructor, and the school has been generous in purchasing some. Any music house is happy to send records if you'll kindly describe the type you wish even if you don't have any particular piece in mind. It is lots of fun to select your own records, and don't overlook the girls' suggestions which quite often are very good. The movies and the radio both stimulate their imaginations. It may take a class a week or more to figure out the musical selection and its possibilities. To an onlooker it may appear hopeless, but really those members are doing their best work. The interpretations will be made and revised time after time.

Basic steps, tempos, arm and hand exercises are given as preliminary work before any original pieces are undertaken. To "A Warbler's Farewell" we imagine two eight-inch balls suspended from the ceiling, one slightly above the other, about one foot in front of our bodies and slightly above our heads—they gradually are being lowered in front of us and then to each side—then brought together in front and raised again. As we imagine this with the atmosphere secured by the music, we slowly move the palms of our hands to the underside, in front and around these imaginary balls as they are lowered and raised. Later we imagine our hands and arms floating in the air doing these rotary exercises.

Costuming isn't as difficult as it may seem. Some instructors may have access to the costumes used in giving operettas while less fortunate will have to devise other means. We find that basic costumes of cheese cloth when trimmed with crepe paper in various fashions change the entire outlook of the outfit. For example, in the military march mentioned above, ten girls, dressed as marines, wore blue and white band uniforms; the other ten girls were dressed in white shorts and shirts with cheese cloth skirt opened in front and trimmed with a band of red, white, and blue paper around bottom, similar paper around waist and over shoulder, and a hat made of crepe paper. These girls wore white boots (borrowed from school members) and trimmed with tassels at top. This made a very attractive chorus. Our tap dancer, who appeared in the V-formation, wore her own blue and gold costume. These cheese cloth skirts were old ones (used in the doll dance last year) so those costumes cost approximately fifty cents, and the crepe paper will be used again. The additional costumes which are being made this spring are from cheese cloth priced at three and a half cents a yard. Girls with doctors excuses are very happy to help make costumes, assist in the wardrobe, help dress and make-up the others, take charge of the victrola and records that night, see that the groups get down on the floor in time, and relieve the instructor of much responsibility and details. Also the most competent dancers work at odd periods

down in the gymnasium with the girls who need more practice.

All of our tumbling is done to music because it helps the pupil to relax. If the instructor fails to bring out the victrola, the girls ask for it. Marching, if done to a peppy piece of music, does more to develop posture than many hours of drill without music. Even a drum is a good substitute. There is a psychological effect produced by the music that gives us an extra lift. If you haven't thought of it that way, see how a company of soldiers steps out to a march; then view another company marching without music.

Remember a group that is satisfied with its first attempts at creative dancing is not a growing group. Each member must live and feel each strain of the music. Dancing and rhythmics aren't meant for a few but for all to enjoy.

A NEW GAME FOR GIRLS*

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The game is called "Pandleball" and was developed from handball with more simplified rules. Pandleball is played with a paddle in each hand, the implement being called a "pandle." The ball is sponge rubber and approximately two inches in diameter. We accumulated ours by asking for contributions from the pupils. Having seen the bruises girls sustained from regular handball even when they wore gloves, we had no need to wonder why it was not popular. By eliminating the possibility of discomfort and injury, pandleball has become a frequent "request" game. Both junior and senior high school girls seem to enjoy playing.

The skill of hitting a ball with a pandle which has no extension is a new one. However, the girls do not mind their first failures when they understand that the best tennis players require the longest learning periods.

The pandles are made from plywood the size of the head of a regulation table tennis paddle. Broken handles give an admirable excuse for converting such table tennis equipment into pandles. Better control is assured when canvas is glued on one side. On this same side a one and one-half by six inch strip of canvas is fastened with chair gliders (two at each end) two inches from the base. This strap makes a handle through which four fingers are placed, palm side on the pandle itself, with the thumb on the outside to regulate its tightness. The two-hand game is preferable because an effective backhand is difficult to negotiate. It also has the advantage of being a game requiring use of both sides of the body.

The floor court is twenty by twelve feet, which is smaller than for handball. We played on the larger court but found the game too difficult because of the increased speed which the pandles seem to develop from the greater striking power.

The major rule changes are: (1) Having a serving area rather than a service line. Server may stand anywhere between short line and long line and serve to any point within the same space. (2) A game is fifteen points with a two-point lead. (3) More than two may play the game in which case those on one team take consecutive turns hitting the ball. It is understood that players on each side of two teams hit the ball alternately as it bounces from the wall.

This is in summary form just to get people in physical education interested in fostering the game as a refreshing new interest for that rainy season slump. We should be happy to send more detailed rules and instructions for making pandles to any who may be more curious. We see possibilities of pandleball developing into a game for boys, in which case a regulation court might well be used. This is a vigorous game and would be a worthwhile addition to the Physical Fitness program.

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PHYSICAL DEFECTS AND THEIR RELATION TO FAILURES AND DISCIPLINARY PROBLEMS

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The following statistics were compiled in an attempt to discover within our own building whether or not apparent physical defects had any effect on scholarship or conduct.

We are entirely aware that we could greatly improve our procedure in the method of accumulating these statistics and in their interpretation, but this is not put forth as a scientific study; it was done merely to show trends. We are fully conscious of the fact that nothing positive can be claimed for the study, due primarily to the very small number of pupils having like defects.

If any value is to be derived from these statistics, it probably will have to be obtained by grouping all the defectives into one class and considering them as a group, rather than by classifying them under their different catagories as: vision, hearing, speech, etc. One would have to have many more cases under each classification before any reliability could be claimed for statistics set up under separate defect headings.

Table I analyses a total of all pupils within our school having some physical handicap. This total has been broken down into various headings and then translated into two different percentage columns—i.e., column two shows that 5.67 percent of all our pupils have defective vision, while column three shows that in the entire handicapped group of 333 pupils, imperfect vision accounts for 21.02 percent of this group.

TABLE I. ANALYSIS OF PHYSICAL DEFECTS OF PUPILS 1939-'40

Defects	Total number of defectives*	Percentage of defectives in relation to entire enrollment of 1,234	Analysis of 333 defective pupils
Misc. Gym Excuses	150	12.15	45.05
Vision	70	5.67	21.02
Hearing	38	3.08	11.41
Speech	25	2.03	7.51
Tonsils	17	1.38	5.11
Cardiac	13	1.05	3.90
Nervous Instability	9	.73	2.70
Deformities	8	.65	2.40
Undernourished	3	.24	.90
	333	26.98	100.00

* Out of a total school enrollment of 1,234 pupils, 333 or 26.98 percent had some physical defect. There were 901 or 73.02 percent of the pupils with no apparent physical defect.

Pupils classified as Miscellaneous Gymnasium Excuses are those pupils who have been excused from participation in gymnastic work by some doctor for any one of several reasons, such as post operative, internal trouble, etc. In many cases this group is made up of pupils who have defects which are difficult to determine.

Pupils in this group are often suspected of just having an aversion for gym work and are really not physically ill. A survey of column number three, Table II, tends to strengthen this suspicion. The percentage of failure in this group is much smaller than in all others.

It is interesting to note how the different handicaps rank in column three (which is probably the most pertinent column of all) on Tables II, III, and IV.

It appears that those pupils with hearing defects fare worse than the others in all types of failures. Vision runs second on Table II but falls into fourth place on Table III which deals only with the more serious failures. Hearing still holds first place on this table.

Table II, which deals with disciplinary problems, shows a slightly different picture. Here, cardiac cases take the lead, with vision second, and hearing fourth (see column three). These findings seem to be in keeping with the opinions expressed by many who have made authentic studies. Several studies show that pupils suffering from cardiac trouble are inclined to be "hot tempered" and are more apt to get into trouble than other pupils.

In our own school we have had instances of cardiac pupils becoming very angry to the extent of threatening to hit a teacher with a chair. Only two weeks after this chair episode, the boy became a hospital case. However, the boy has since improved, but has not been able to return to school.

TABLE II. DISCIPLINE PROBLEMS INVOLVING DEFECTIVE PUPILS 1939-'40

Defects	Total No. of Defectives	No. of Disciplinary Cases Having Defects	Percentage of Pupils in Disciplinary Trouble in Relation to Total No. with Similar Defects	Percentage of Failures in Relation to the Entire Group of 333 Defective Pupils	Analysis of 146 "Defective-Failing Pupils
Misc. Gym Excuses	150	11	7.33	3.3	21.57
Vision	70	22	31.42	6.61	43.14
Hearing	38	8	21.05	2.4	15.69
Speech	25	2	8.00	.3	3.92
Tonsils	17	0	0	0	0
Cardiac	13	5	38.46	1.5	9.80
Nervous Instability	9	2	22.22	.9	3.92
Deformities	8	1	12.50	.3	1.96
Undernourished ..	3	0	0	0	0
	333	51	15.32	100.00	22.22

Out of an enrollment of 1,234 pupils, teachers found it necessary some time through the year to send 311, or 25.2 percent, different pupils from their rooms for some misdemeanor. Of this group of 311 pupils, 260, or 28.86 percent, were from the normal group of 901. The remaining 51 pupils comprised 15.32 percent of the defective group.

In other words, 28.86 percent of all the normal pupils were sent from the rooms and 15.32 percent of the defectives were sent out.

Out of a total school enrollment of 1,234, 331, or 26.82 percent, of the pupils failed in two or more subjects. These 331 pupils were composed of 238 or 26.42 percent, from the normal group and 92, or 27.64 percent, from the defective group.

TABLE III. PUPILS RECEIVING TWO OR MORE FAILURES AND THEIR RELATION TO PHYSICAL DEFECTS 1939-'40

Defects	Total No. of Defectives	Number Failing Having Defects	Percentage of Pupils Failing in Relation to Total No. with Similar Defects	Percentage of Failures in Relation to the Entire Group of 333 Defective Pupils	Defects of 146 "Defective-Failing Pupils"
Misc. Gym Excuses	150	24	16.00	7.21	25.81
Vision	70	25	35.71	7.51	26.88
Hearing	38	22	57.89	6.61	23.66
Speech	25	10	40.00	3.01	11.83
Tonsils	17	2	11.76	.60	2.15
Cardiac	13	3	23.07	.90	3.23
Nervous Instability	9	4	44.44	1.20	4.30
Deformities	8	1	12.50	.30	1.07
Undernourished ..	3	1	33.33	.30	1.07
	333	92	....	27.64	100.00

TABLE IV. FAILURES AND THEIR RELATION TO PHYSICAL DEFECTS 1939-'40

Defects	Total No. of Defectives	Number Failing Having Defects	Percentage of Pupils Failing in Relation to Total No. with Similar Defects	Percentages of Failures in Relation to the Entire Group of 333 Defective Pupils	Defects of 146 "Defective-Failing Pupils"
Misc. Gym Excuses	150	41	27.33	12.31	28.08
Vision	70	42	60.00	12.61	28.77
Hearing	38	27	71.05	8.11	18.49
Speech	25	10	40.00	3.00	6.85
Tonsils	17	10	58.82	3.00	6.85
Cardiac	13	6	46.15	1.80	4.11
Nervous Instability	9	4	44.44	1.20	2.74
Deformities	8	4	50.00	1.20	2.74
Undernourished ..	3	2	66.66	.60	1.37
	333	146	....	43.83	100.00

Out of a total school enrollment of 1,234 pupils, 656, or 53.16 per cent, of the pupils received one or more failing marks at the end of the term. Of these failing pupils 510, or 56.6 per cent, were from the physically normal group, while 146, or 43.84 percent, were from the defective group.

We have had several instances where the correction of hearing and vision defects has decidedly improved scholarship and conduct. We have also had instances where a pupil who had previously been a good citizen gradually began to slip in conduct and sometimes developed into a real problem case. In several of these cases we found, in cooperation with the pupil's family, that the pupil had developed some physical defect. Corrective treatment seemed to restore the pupil to his original status in scholarship and citizenship.

In summarizing we might say that if one confines his analysis solely to the defective group, there appears to be some relationship between certain defects and their correlation to scholarship and behavior. But, if the entire school population is considered, it appears that there is a greater percentage of failure among normal pupils than defective pupils (see Table IV). 56.8 percent of the normal people failed, while only 43.8 percent of the defectives failed. However, when only more serious failures are considered, very little difference exists between the two groups. Serious failures in the normal group averaged 26.42 percent, while

in the defective group they reached 27.64 percent level. This might tend to show that physical handicaps may have some serious bearing on serious problems.

We get the same picture when we study the disciplinary cases. We find 28.86 percent of our normal group have been in some sort of difficulty, while only 15.32 percent of our defective group have been in trouble. This seems to appear rather logical, as one can easily picture a good normal healthy youngster who sometimes is too lively for his own good.

However, from observation, we might venture the suggestion that often it does appear that many of our more serious disciplinary problems occur in the physically handicapped and sub-normal group.

TEST MANUAL FOR INDIANA UNIVERSITY MOTOR FITNESS INDICES FOR HIGH SCHOOL AND COLLEGE AGE MEN*

KARL W. BOOKWALTER

History of the Indices

In an effort to establish a simple, valid and inexpensive test of motor fitness, the utilization of Index I ((chins plus push-ups) times vertical jump) was justified by a previous study.[1] This simplification of previously established tests had a validity coefficient of .831±.01 with a criterion of 20 items in that study. A validity coefficient of .859±.01 with a more select criterion of 12 items was obtained in a recent unpublished study of the same source.

Since the development of Index I, a new type of partner chinning (straddle chins) has been designed by the author. No equipment is needed for this form of chinning. McCloy has further suggested the substitution of standing broad jump for vertical jump. Accordingly, in the interests of greater simplification and adaptability, the following four indices have been developed and validated:

Motor Fitness Index I	(chins plus push-ups) times vertical jumps*
Motor Fitness Index II	(chins plus push-ups) times standing broad jump
Motor Fitness Index III	(partner chins plus push-ups) times vertical jump
Motor Fitness Index IV	(partner chins plus push-ups) times standing broad jump

* All items are modified T-scored ($6_\sigma/100$).

The 12 item criterion against which these indices were validated involved 2 or more measures each of strength, velocity, motor ability, and endurance. The validities of the above indices with this criterion were .859±.01, .818±.01, .841±.01, .812±.01, respectively.

Since all of these coefficients are high and of reasonably approximate value, it would appear that instructors would be justified in utilizing that index which is most feasible with respect to their equipment and self-testing program. However, other things being equal, it seems obvious from this last study that Indices I and III are preferable.

The Uses of Motor Fitness Indices

The most obvious use of these indices is (1) for the measurement of achievement of secondary school boys and college men in physical fitness programs including a wider range of activities than is included in the test itself. These indices involve measures of strength and velocity but are combined according to the power principle ($P=F\times V$). To this end achievement scales for the four indices are available,[2] for various Classification Index I groups (McCloy) and for the nine Height-Weight Class divisions for College Men (Cozens).

(2) Gains in achievement for the body types quite logically and justly could be used as a basis for a partial mark in the physical education service program.

(3) Finally, the use of these Motor Fitness Indices as the functional and primary classifier in an administrative ability grouping involving Classification Index I (McCloy) as the secondary structural classifier has been carefully established statistically. This administrative combination of strength or power measures with structural measures is in harmony with recommendations by McCloy, Brace, Rogers, and others.

Directions for Administering the Test

A Motor Fitness Index can be given in one fifty-minute period to a large number of men (sixty or more). The class should be divided into groups. One half of the class should be given the chins and vertical jump (or standing broad jump) under their squad leaders. The other half should be re-divided into halves. One half of this latter group will do the push-ups while the other half records. The push-up groups will then exchange—the former recorders doing the push-ups which are recorded by

* Republished by courtesy the School of Education, Indiana University.

[1] "A Measure of Motor Fitness for College Men," by Karl W. Bookwalter and Carolyn W. Bookwalter, *Bulletin of the School of Education*. Vol. XIX, No. 2, Bureau of Cooperative Research and Field Service, School of Education, Indiana University, Bloomington, 1943, pp. 26.

[2] Bulletin of School of Education, Bureau of Cooperative Research, "Studies of Indiana University Motor Fitness Indices," for sale by Indiana University Bookstore, Bloomington, Indiana. 50 cents.

the former performers. The two *halves of the class* will then exchange so that all get the chins, push-ups, and vertical jump. If the straddle chins are used, half the class can do the chins and push-ups while the other half is scored by squads on the vertical or standing broad jump. The halves are then reversed.

Rules for Motor Fitness Index Items

1. The chins may be performed with any grip. No half credits are permitted and the chin must clear the bar on each pull-up. Arms must be fully extended on the return. No swinging or kicking is allowed, although an assistant may steady the legs of the chinner. The chins must be executed regularly without rest.

2. Straddle chinning. Size the class and count off in twos. Numbers one lie on their backs with arms sideward shoulder level on the floor. Upper arm is bent to vertical. Numbers two stand astride and facing numbers one, feet outside and touching elbows of ones. Partners then clasp hands, bent finger hold, and numbers one chin upward as often as possible. Chest should meet firm resistance with partners' thighs each time. Both partners keep legs and back straight. Arms of supporting partner are straight throughout. Partners next change places and repeat as before.

3. The push-ups are executed from a front support. The chest must touch the floor each time and the arms must be fully straightened on the return. The back must be kept straight. No partial credits are allowed and the dips must be done regularly with no rest in between.

4. The vertical jump is made to a blackened plywood board suspended from a basketball backstop. (Five feet long and one foot wide.) The jumper toes a line one foot in front of the board. If boards are not available, the jumper can face a wall. The index finger is chalked with magnesium. The jumper reaches as far as possible with the heels kept on the floor and makes a mark on the board with the chalked finger. Next he executes three jumps vertically from a crouch, making a mark each time upon the board. The distance from the *top* of the reach mark to the *top* of the *highest* jump mark is recorded as the vertical jump. Measure to the last quarter inch.

5. The contestant toes a line which is four feet from the pit, on first 6″ mark on the mat, he springs forward off of both feet. The nearest point, touched by *any* part of his body, at right angles to the take-off line is his jump. Measure to the nearest inch. If jumping on the mat, lines may be marked in 6″ intervals and the nearest inches estimated.

Motor Fitness Index Score Card

Department of Physical Education for Men
Indiana University

Name _____ Section _____

Dates of Tests	Scores							
Items	Raw	Tsc	Raw	Tsc	Raw	Tsc	Raw	Tsc
1. Chins, or Straddle Chins*								
2. Push-ups								
Sum of T-scores								
3. Vertical or Standing Broad Jump								
Which gives the	To be multiplied by T-score of							
Motor Fitness Index								
Gains in percentage								
M.F.I. Classification								
(E, G, F, P, I)								

* Comparisons in retests must always be of the same items (same index).

Directions for Scoring Motor Fitness Index

The above individual *Motor Fitness Index Score Card* permits of comparisons with past records and with school or present norms. Assume that the raw scores of John Doe in Motor Fitness Index I are as follows:

Chins	6 times
Push-ups	18 times
Vertical Jump	18.25 inches

Referring below to the "Scale Scores for Motor Fitness Index Items" it can be seen that:

6 chins earn a score of 44 points
18 push-ups earn a score of 55 points

Adding these two force items 99 points is the sum. On the same scale we find that a vertical jump of 18.25″ gets 35 points. By multiplying the sum of the scale scores earned on the chins and push-ups (99) by the scale score earned on the vertical jump (35) a product of 3465 is obtained. Dividing this product by 100 (point off two places) for simplicity and rounding to the nearest whole number a Motor Fitness Index of 35 is obtained.

Scale Scores for Motor Fitness Index Items
(Modified T-scores $6\sigma/100$)

Scale Score	Raw Scores	Chins Straddle	Chins Push-Ups	Vertical Jump	Standing Broad Jump	Scale Score
100	17	35	36	29.75	110	100
99				29.50		99
98				29.25	109	98
97		34	35	29.00		97
96	16				108	96
95			34	28.75		95
94		33		28.50	107	94
93						93
92		32	33	28.25	106	92
91	15			28.00		91
90			32		105	90
89		31		27.75		89
88				27.50	104	88
87			31	27.25		87
86	14	30				86
85			30	27.00	103	85
84				26.75		84
83		29			102	83
82			29	26.50		82
81	13	28		26.25	101	81
80			28			80
79				26.00	100	79
78		27		25.75		78
77			27	25.50	99	77
76						76
75	12	26	26	25.25	98	75
74				25.00		74
73		25			97	73
72			25	24.75		72
71				24.50	96	71
70	11	24	24	24.25		70
69					95	69
68				24.00		68
67		23	23	23.75	94	67
66						66
65	10	22	22	23.50	93	65
64				23.25		64
63					92	63
62		21	21	23.00		62
61				22.75	91	61
60	9		20	22.50		60
59		20			90	59
58				22.25		58
57		19	19	22.00	89	57
56						56
55			18	21.75	88	55
54	8	18		21.50		54
53					87	53
52			17	21.25		52
51		17		21.00	86	51

SCALE SCORES FOR MOTOR FITNESS INDEX ITEMS—Continued
(Modified T-scores $6\sigma/100$)

Scale Score	Raw Scores	Chins Straddle	Chins Push-Ups	Vertical Jump	Standing Broad Jump	Scale Score
50			16	20.75		50
49	7	16			85	49
48				20.50		48
47			15	20.25	84	47
46		15				46
45			14	20.00	83	45
44	6			19.75		44
43		14		19.50	82	43
42			13			42
41		13		19.25	81	41
40			12	19.00		40
39	5				80	39
38		12		18.75		38
37			11	18.50	79	37
36						36
35		11	10	18.25	78	35
34	4			18.00		34
33		10		17.75	77	33
32			9			32
31				17.50	76	31
30		9	8	17.25		30
29						29
28	3			17.00	75	28
27		8	7	16.75		27
26				16.50	74	26
25		7	6			25
24				16.25	73	24
23	2			16.00		23
22		6	5		72	22
21				15.75		21
20			4	15.50	71	20
19		5				19
18	1			15.25	70	18
17		4	3	15.00		17
16				14.75	69	16
15			2			15
14		3		14.50	68	14
13				14.25		13
12			1		67	12
11		2		14.00		11
10				13.75	66	10
9		1		13.50		9
8					65	8
7				13.25		7
6				13.00	64	6
5						5
4				12.75	63	4
3				12.50		3
2					62	2
1				12.25		1

POSSIBILITIES FOR TESTING CHARACTER AND PERSONALITY TRAITS IN CONNECTION WITH THE PHYSICAL EDUCATION PROGRAM

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Life is becoming increasingly more complex. Science and invention are advancing with such rapidity that we have difficulty in attempting to keep up with all of the modern happenings. In communication, the radio makes it possible for one to sit by their fireside and listen in on a three-way connection among Associated Press correspondents in Paris, London and Chicago. Television is a reality and it has been predicted that within five years television receiving sets will be almost as common as radio. Streamlined trains, stratoliners and palatial ocean vessels are serving us in ultra rapid transportation. Passenger autos, rush along our 6-, 8- and 10-lane super-highways at 60-80 miles per hour.

It is no longer possible for one person to know all there is worth knowing as it might have been 200 years ago. Specialists disagree (even in the field of tests and measurements in physical education) and no wonder. The vast array of knowledge, together with the many skills and techniques, are enough to confuse a committee of Solomons. It is into such a confusing environment that our young people are born, and the job of guiding them through this maze has been delegated to us—the professional educators.

We are confronted with a great responsibility. We must help these students adjust their lives to the complex economic order in which we live it is true, but we also help them adjust their lives to this business of living successfully and happily with others. This responsibility is being met in an increasing number of schools by programs of guidance and counseling, which are serving admirably.

In the vocational part of guidance, students are helped to select occupations based upon their interests and adaptabilities; to select specific courses of study that have definite bearing upon their chosen occupation—to consider scarcity of openings in some lines of work, and lack of opportunity for advancement in others; to analyze various vocations in the light of their eventual financial independence, and other factors of an economic nature that may influence their success in a chosen field.

Our responsibility has not been fully met, however, when we have launched a boy or girl out upon life with the vocational knowledge and skill necessary to secure and hold a job. The art of living successfully and happily does not depend entirely upon any such preparation. Most schools having guidance and counseling programs provide for meeting this responsibility by helping their students adjust their personalities, or integrate them as you prefer.

This greater concept of guidance, i.e., in addition to vocational guidance in a strict sense, requires the co-operation of all departments and of all teachers in school if it is to function efficiently. One department, or one teacher cannot do it, even though it be the department of Physical Education or the head of the guidance program.

Some departments and some teachers are of course better adapted to such guidance than others, and perhaps after all is said and done, it is the personality and living example of the teacher that does the job, although certain methods of procedure are necessary.

Physical Education is one of the better adapted fields in which opportunities for character training exists. This is especially true for boys in high school, because the activities of the program provide one of the most natural means for the expression of boy life than can be found anywhere in the curriculum. It may be that the field of home economics is better suited for this sort of guidance among girls, because their interests may lie more generally in that direction rather than in the direction of competitive sports and games.

Be that as it may, since my work is with boys, I shall confine my remarks to that phase of Physical Education, although in our experiments with co-recreational activities in the boys and girls classes at Lincoln there is very strong evidence that guidance in personality adjustment is highly possible.

The topic which was assigned to me was "Possibilities of Testing Personality and Character Traits in Connection with the Physical Education Program." Before we go too far I want to emphasize the point toward which I have been working thus far. I may state it briefly thus—

(1) The complex world in which we live requires that educational institutions provide for the guidance of its pupils not only in the direction of vocational training, but also in the direction of adjustment in living with other people.

(2) All departments must work toward this end if it is to work successfully.

(3) Physical education is one—not the only one—of the fields in which this thing is highly possible.

I will add a fourth point. No testing program is justified unless it adds to our knowledge of the individual and his needs and enables us to counsel

him and guide him to successful and happy living.

There are some who maintain that any attempt to measure such elusive things as character traits is bound to end in failure. There are others who say that this is only partially true, and that the truth of the matter may lie in the fact that we have not been smart enough to devise accurate measuring techniques rather than in the assumption that it is now and ever shall be impossible to measure them.

However, those who have been working on the problem of testing character traits feel that the results that can be obtained by methods available are accurate for use in certain aspects of guidance.

There have been many notable attempts made to measure character and personality since Francis Galton in 1883 published his scale for rating the clearness of one's mental imagery of their breakfast table, which was probably the first attempt to measure mental qualities.

Among various special methods which have been devised since that beginning, rating scales are probably the most widely used. Garrett and Schenck in their book "Psychological Tests, Methods and Results" classify them under four heads—"Man-to-Man," "Graphic," "Numerical" and "Descriptive or Adjective."

Modifications and combinations of these four methods have been used in almost every imaginable situation from the Army Personnel Department, where the "Man-to-Man" scale originated, to tests for college entrance and vocational guidance. They have met with varying degrees of success, and I might add—abuses. What experience we have had has been with rating scales, in which the rating has been done by the student leaders of activities.

Such a rating method was proposed by Dr. McCloy in an article "Character Building Through Physical Education," published in the Research Quarterly for October, 1930. I presume that most everyone interested in this phase of Physical Education has read it, at least I hope so, because it sets forth the philosophy underlying character training in this field, which has been and still is the basic thought upon which any such attempt should be based.

At the end of this article he proposed a rating scale method for measuring the traits involved. This included 37 trait actions arranged or classified under 9 traits, and placed on a convenient form having one column for rater's assurance—5 columns for frequency of observation scored 1-2-3-4-5, or the reverse, depending upon whether the trait action was stated positively or negatively, and one column for total score.

For some time we used a modification of this scale in our boys' physical education classes. The number of trait actions was reduced by a process of elimination based upon their intercorrelation. The "rater's assurance" column was eliminated because it was found that the scores obtained measured the "acquaintanceship" that existed between the rater and the ratee, and not the degree of assurance on the part of the rater of the existence of the trait actions involved. Otherwise the scale was the same as that proposed by McCloy.

A new type of rating scale has been developed quite recently in our department. The Behavior Rating Scale[1] contains 21 trait actions arranged according to a scoring method depending upon the frequency of observation. In the former scale five categories were used but in this one they have been reduced to three, with possible three values under each. These values are arranged either in ascending or descending order depending upon how the trait action is stated. For example: In number 1, "Does he wander away from your activity?" It is clear that the column "never" should command a higher score than "often" or "very often." In number 3, "very often" would command a higher score than the other two categories, so the values are arranged accordingly.

The scoring method is much easier than in the former scale, because all of the boys' names in a given group are tested on one form, the Rating Chart, rather than on separate forms.

You will notice that there are seven groups of columns arranged with three columns to each group and that all of them are numbered consecutively from 1-21, and correspond to the seven traits found on the "Behavior Profile." The letters A, B, C, D and E refer to the activity groups listed under "Activity Profile" and show in which activity groups the scores have been made.

At the end of the instruction period in each activity group the names of all boys in a given group are listed on the Rating Chart. During some free period of the day each leader takes this chart and the Behavior Rating Scale and proceeds to separate the boys into the three categories according to each trait action. When this has been done, he proceeds to assign to each boy one of the three values found in the category to which he feels the boy belongs. This value is set down opposite the boy's name under the trait action number on the "Rating Chart." This is repeated for each boy and each trait action. The total score is found by arranging the scores given by the leaders in that particular group. These are placed under the correct letter on the Behavior Profile and spotted on the cross ruled form. A line connecting the averages thus spotted for each trait forms what we call the Behavior Profile, a glance at which shows us, theoretically, which boys need attention and suggests possibilities for us to investigate in order to help boys to curb certain undesirable behavior

[1] See C. W. McCloy, Tests and Measurements in Health and Physical Education, pp. 277-292.

tendencies, and develop others of a more desirable nature.

The records that are made in this manner are scanned carefully in a sort of screening process, and boys who seem to be having difficulty, as indicated by low ratings, are observed individually to determine if possible what cause there may be for such low ratings.

In about 40 percent of the cases uncovered by the screening process, according to our former scale, definite behavior tendencies could be found.

(The new method above described has not been in use long enough to tell how much better or worse it will be.)

In either case, however, the procedure is the same when these tendencies have been revealed. This can best be shown by outlining two cases in which first information regarding the behavior of two boys was obtained from a study of rating scale scores. The procedure followed in these two cases is typical of a large number of cases that have passed through the department.

Case 1—Ed was a boy in one of our classes four years ago. When the ratings were made after the first three weeks it was noticed that Ed was marked very low in "Sociability." Investigation revealed the fact that he preferred to be alone, was ashamed to be undressed before the other boys, did not like competition and would do anything to avoid the rest of the boys. Naturally enough he was marked low in other traits also, but I need not go into that, because these particular things just mentioned were at the bottom of his difficulty, and it was his behavior tendency that had to be corrected before the others could be altered. In this case, as well as in all others, a certain procedure was followed.

First, we made it a point to give him a smile, a word of encouragement, a casual pat on the back and made frequent inquiry regarding his interests. Then the student leaders in charge of the activities were taken into the confidence of the instructor and were told what to do.

They were to encourage him with a smile and friendly word of greeting, not only during the class, but also when they met him in the halls, lunch room and other classes about the school.

His other class teachers were informed of his difficulty. In the light of all this attention and friendliness, Ed soon began to show signs of improvement, and by the end of the year was having the time of his life not only in the Physical Education class, but also around the school.

The following year he became a student leader apprentice, and his senior year was not only a full fledged student leader but also was general manager of all intramural sports, a job which he did splendidly. He came to see me last October and told me what a fine experience he had had in Physical Education, and that he had found himself there.

Case 2—Walter was another boy who had been rated very low in everything on the scale. Investigation revealed that he was one of those very real problem cases that you read about. His whole school course had been cluttered up with failure; his family life was nil and all teachers were his enemies; and books were to leave in one's locker from the time they were issued until time to return them. Every known trick was tried to make some improvement in his behavior, but he seemed impregnable as Mount Rainer.

Finally in desperation last spring after he had repeated his physical education work three times because of failure (and we do fail pupils sometimes) I told him that the only thing that would ever get him straightened out was the Army. He quit school soon after to the great joy of all his teachers and the principal. We heard nothing from him until week before last. I was in my office working on some health test papers. All of a sudden, there stood Walter, attired in the uniform of the United States Army, standing at attention and smiling with a rather strange twitching of the muscles about his mouth. Neither of us spoke for some time. Then he broke the silence with this—"I just thought I'd drop in and thank you for all you did for me. You told me a lot of things I didn't believe then, but I do now."

Then he went on to tell me things about his success and his plans. He had finally found his place and had taken it, apparently satisfied that if it had not been for Physical Education he would still be a "good-for-nothing" failure.

These two cases illustrate not only the screening process possible in this sort of a program, but also the process by which different environmental influences may be adjusted to help individuals eliminate certain objectionable behavior tendencies and create new ones that will help them to live more successfully and happily.

CADET TEACHING IN PHYSICAL EDUCATION

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There was a time—long ago—when teachers were born, not made. Anyone wishing to follow teaching as a life's work had only to complete the eighth grade to be eligible. Few were the number who wanted to be teachers. In fact, anyone declaring that teaching held an interest for her was judged to be a bit "teched in the hade." All that was necessary to become a teacher was an application to the proper authorities and the job was forthcoming. Pay was small, but positions were easy to obtain.

In those days marriage was the all-important career for a woman. In fact, to this day it still is the thought uppermost in the minds of many. Not that this should not be the case. It is merely a fact to be stated. It was rather an easy matter for the new school teacher to have many beaus, one of whom eventually succeeded in carrying her away to his abode as a wife. Teachers were leaving the teaching field in all months of the year. No sooner would a school year start than the teacher would turn up some morning as the bride of a young farmer. Schools were often closed in the middle of a school year because of a lack of a teacher to carry on.

It became necessary to pay enough money for the position to attract more teachers so that any vacancies that developed could be filled from a waiting list of teachers who were waiting for just such a situation. The training of teachers to fill the necessary positions became the major efforts of many colleges all over the country. When this number became insufficient there sprung up in all states teachers colleges which devoted their efforts entirely to the training of teachers.

Probably the real teachers are still born, and not made; but those natural-born teachers can become better in their work if the training they receive is along the lines of teacher-training. And so, in addition to learning the "3 R's" in school these future teachers were given courses in the techniques of teaching these subjects. Such courses as principles of education, history of education, administration of education, sociology, economics, psychology and English aided to develop future teachers. The arguments between teachers colleges and liberal arts colleges—method versus material—still goes on. There need be no argument. A teacher must have not only something to teach but also ways of teaching this something.

Now, a new phase of teacher training has gained the attention of educators. I say new—it is not new. In fact it is very old. But, like Mark Twain's weather, "nothing has been done about it." This new phase is called cadet-teaching, or student-teaching, or associate-teaching. It is the placing of a prospective teacher in a regular school situation, where, under the watchful eye of the regular teacher, she gains teaching experiences in the actual school day. She corrects papers, gives tests, aids in the administration of the school, and does real teaching of classes to the children of the school. It is a laboratory experience, if you please, in school teaching.

Many magazine articles have been written about the cadet-teaching programs in various localities in the United States. Excellent jobs are being done, especially in the teachers colleges in Pennsylvania, California, and the Colorado State College at Greely, Colorado. Following is the program carried on by the Physical Education Department at Ithaca College, Ithaca, New York.

Ithaca College is devoted to the training of teachers in the fields of music, drama and physical education. It is a private, co-educational institution with a student body of approximately 600 students. Nearly fifty percent of the students are in the Physical Education Department.

There are three separate and distinct courses given in cadet-teaching. The first gives the student experiences in a private school; another gives experiences in the public elementary schools; while still another furnishes experiences in the public high schools. Each will be taken up separately.

The Private School Experiences

There is, in Ithaca, a private elementary school. This school is very glad to have the college students aid in the physical education program. The college is equally pleased to have students get this teaching experience. The program works to the mutual benefit of all. The school has no playground so the work must be done in the classrooms, between fixed seats. This is a situation that is going to be met by our students when they get out in the teaching field. It is not a condition that is peculiar to private schools.

During the junior year the students are assigned to the first course in practice teaching. This is a combination theory and practice class. A number of students, sufficient to handle the private schools program, are delegated to conduct the physical education program of the school. This teaching and program planning is done under the supervision of a faculty member assigned to this work. The regular teachers in the school also aid in the program and give constructive criticism to the cadets. Those not assigned to teaching in the school meet in the college classrooms to study methods and materials of teaching. Each week a new group is assigned to the private school. Those who have been teaching then return to the classroom to gain more knowledge in methods and materials and to also, through a

seminar type of class procedure, ask and answer questions pertaining to their teaching experiences. The junior class is divided—half of them having the course in the fall, and half in the spring. This is necessary to give service to the school for the entire year. Each student gets to teach from ten to twelve school classes in physical education during the course. As has been stated, the rest of the time the student is in a college class in methods and materials. The students are highly enthusiastic over this, their first teaching experience.

The Elementary Public School Experiences

The elementary school experience does not necessarily follow that of the private school. Because cadet teachers must be kept in all of the schools for the entire year, half of the students teach in the elementary schools while half takes the secondary schools. These change places, then, at the next session. For this reason, half of the students get their secondary training before they teach in the elementary schools. There seems to be no apparent reason why this should not be so done. Great care is taken to see to it that all students get both the elementary and the secondary school experiences. Rarely is a student permitted to have two sessions in an elementary school or two in a secondary school, although this sometimes does happen.

Most of the elementary school teaching is done in the public schools of Ithaca. Ithaca has seven elementary schools. All of the physical education teaching in all of these schools is done by Ithaca College cadet teachers. Ithaca has a city director of physical education, Mr. E. E. Bredbenner, who is in complete command of this area. He assigns the cadet teachers to the various schools, makes out the city program, and supervises the teaching. In addition to this supervision, the College has a faculty member who observes every cadet at least once a week. Also, the regular classroom teachers must be present at all classes taught by the cadets and she supervises, advises and in many ways aids the cadet in his work. At four o'clock on every Monday the cadets are called into the College for a general discussion of the past week's performances. At these meetings the city director and two faculty members of the college discuss with the students the shortcomings observed during the week. It is at these meetings that students seek advice and counsel for their next week's programs.

Each student must teach a half day—either morning or afternoon—for a nine-week period. All grades are taught, first through sixth. The city has a graded program which must be followed. This prevents duplication of effort when teachers are changed at the end of their nine-week's term. In addition to getting experience in an actual teaching situation, the cadets get experience in lesson planning, discipline procedures, administration, marking and guidance in general.

Every school has an outdoor play space and an indoor play room or gymnasium. Equipment on hand in every school includes mats, balls, bats, radio-phonographs and records. Every playground and play room is marked off for various games. The cadet gets this elementary experience in the second semester of his junior year. It may look a bit odd to see a big 210-pound tackle teaching "Farmer in the Dell" to a first grade, but it is done in all seriousness and successfully, too.

The Secondary Public School Experiences

During the first semester of the senior year the cadet gets his training in the secondary school. As Ithaca has only one junior high school and one senior high school only sixteen cadets may be trained locally, in the senior year. This means that nearly 75 percent of the students must get this training out of town. The student must leave the college for a nine-week's period and take up his residence in the town in which he is to teach. No student is sent to a school unless there is a full-time teacher of physical education in the school. Students are considered to be faculty members and must conduct themselves accordingly, observing all rules and attending faculty meetings. They are assistants to the head of the department and obey his instructions. A faculty member of the college is assigned to call on these cadets who are teaching out of town and each student is observed once a week. In cities, such as Rochester, weekly meetings are held in the evenings of all cadets by the faculty advisor. In other places conferences are held with each individual.

Teaching in the secondary schools is for a complete school day, five times a week for nine weeks. In addition to the regular school classes the cadet must help with the noon-hour program, the intramural program, and the varsity coaching. The State of New York demands 180 cadet teaching hours as a minimum. Some Ithaca students put in as high as 450 hours in this field.

When, and where, school camping and after-school playground programs are started in the schools the cadets will also receive experiences in these areas.

The student pays his own expenses while teaching out of town. If he has been staying at a college dormitory and eating in the college dining room an adjustment is made by the college for this period.

Some may well ask why such an extensive program is necessary. It is the experience of the college that the majority of the graduates fill positions upon graduation that not only demand teaching in the high schools and coaching varsity sports but also supervising the elementary program. In many of the central schools elementary children must be

taught. A knowledge of elementary schools is as vital as a knowledge of the high schools. Advanced positions in administration also demand a knowledge of the elementary schools. The college feels that elementary experiences are very important.

Here is an innovation that might well be followed in other subjects. The cadet has three courses in this area. Each course carries two hours of credit. Personally, I believe much more credit should be granted but the college has ruled that six credits are all that may be earned. The mark for the three courses are withheld until the completion of the last teaching experience. The cadet then gets a mark for the three courses that represents his final ability. It is felt that what he is at the end is the mark he should receive. This really represents his true cadet teaching ability, upon which we are marking him.

Some say such a program must take a great deal of faculty supervision. It does. President Butler, of Columbia, when asked what he thought of the forty-hour week stated that he was more concerned about a forty-hour day. A forty-hour day is necessary to supervise cadet teaching such as this. Two faculty members devote at least half of their time to this work. In addition to this another faculty member has one class a day for five days a week in this field. It takes both time and money, but Ithaca College and the students think it is worth it.

IN-SERVICE TRAINING FOR ELEMENTARY PHYSICAL EDUCATION TEACHERS

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A large group of teachers are on the gymnasium floor in gym shoes and ready for participation in physical education activities. Another large group of teachers are seated around the outside of the floor. This is the customary plan for the physical education meetings of the elementary teachers of grades one through four in the Evansville Public Schools. The purposes of these monthly meetings are many, although *in-service training* is the main objective. These meeting times are ideal for announcements, group discussions of common problems, and teacher-participation in suggestions and explanations. Also, the social contact between teachers, some of whom are in schools far apart, is stimulating and enjoyable.

In January, 1941, the author changed from physical education teacher in John M. Culver Elementary School to demonstration teacher and supervisor in the elementary schools of Evansville. At that time it appeared that the greatest need of elementary teachers, who teach their own physical education classes, was lack of ability to adapt available material to their own class situation. Many of them wished assistance in teaching rhythmic work. Often because neither a piano nor specific victrola records were available, a teacher felt she could not carry on a rhythmic program. Many teachers needed to widen their repertoire of stock games and stunts, to add new ones, and to bring dramatic play into the physical education period.

It was decided that these needs might be met best and most efficiently by a series of demonstration meetings. Actual participation in the games and activities at these sessions was thought to be the ideal way of teaching teachers. Many teacher problems were solved by demonstrations of uses of substitute equipment. For example, the technique of using a drum for rhythm work was demonstrated. Teachers were told and shown that beanbags, to take the place of balls if they were scarce, could be filled with sawdust as well as beans. As one outgrowth of the meetings, teachers were encouraged to contribute devices and techniques of their own, which might be used by fellow workers.

Previous to each of the meetings, which were held at 4:15 on a school day afternoon, a large group of teachers are invited to aid in demonstrating all the activities under discussion. This group meets during a week-day afternoon, previous to the general meeting, and works out the activities in which they will participate. By planning the invitations, every teacher has an opportunity to aid in these practical demonstrations some time during the year. The spirit of co-operation is high, and teachers know each other better after having played together in such games as "Center Base" or "Fire in the Mountain."

Naturally, there are a few teachers who are unable to actively participate. They aid by distributing the explanations and directions of the games and rhythms being demonstrated. They see to it that enough seats are available, windows open, and the gymnasium comfortable.

Stunts, active games, quiet games, rhythmics, and dramatic play are presented at each program. When need is made known for help on specific activities, more emphasis is given on that type of activity, how to do it and how to teach it. Although it is certainly true that a physical education teacher does not need to actively participate in *all* physical education activity, it is also known that she can teach better those things with which she is familiar

and which she has done at some time in the past. Then, too, children appreciate their teacher's playing in the game or rhythm with them. She helps them with class room situations, and it is quite natural for them to expect her active participation in their physical education activities.

Hostesses for the hour are the teachers in the school where the meeting is held. Each time the place of meeting is changed so that teachers become familiar with other school buildings in the city beside their own, as well as have the opportunity to welcome other teachers to their own school. However, this year, due to travel restrictions and congested public busses, the meetings were held in downtown elementary schools, which were most easily accessible to teachers.

As soon as visiting teachers have arrived and have made ready to participate, or have been seated, the meeting begins. Usual procedure minimizes speeches and announcements and concentrates on actual demonstrations of physical education activities. Since teachers from grades one to four are present, activities are presented on several levels of difficulty and grade placement. The gradation of activities, beginning with the simple and leading up to the complex, gives teachers a good understanding of the skills children should learn on each level. Teachers are better prepared to determine the type of activity their class is capable of mastering. In some cases a third grade teacher might have to use fundamental rhythmic movements of first grade level with a child who has poor co-ordination and limited skill knowledge. Frequently a superior group of first grade children might be led to greater achievement by offering them more advanced material.

In one meeting held recently at Columbia Elementary School, 24 teachers participated in the games, rhythms, and story plays, while 130 other teachers were present. The meeting began by the demonstration of "Can You Tell Me," a rhythmic activity used in grades one and two. "The Clapping Land," a singing game for grades one and two, was next, and teachers pointed out the possibilities of allowing children to give suggestions as to the land they wished to represent, such as nodding land, jumping land, etc. "Jump, Jim Crow," a folk game, was the third rhythmic activity to be demonstrated, and "Turn the Glasses Over" was the last folk dance presented.

"The Three Bears," a well-known children's story, was dramatized as a story play, showing one way to gain free-moving rhythm and big-muscle actions, as well as inspire the dramatic interests of the children. Another story play, demonstrated by the teachers, was "Cowboys," a theme elaborated by the children, and led by one of the teachers.

Stunts used were "Balloon Blowing," "Duck Walk," "Airplane Balance," and "Wiggle-Waggle." Active games played by the teachers were "Mousetrap," "Knock-Over" (a relay), "Streets and Alleys," and "Newcomb." Mimeographed copies of all the activities presented, with music for the rhythmic activities, were given to each teacher before the demonstrations, so she could watch the games and check with her written directions to see if she understood everything clearly.

Emphasis during these programs is placed on the *maximum of movement* for all the individuals in the class, rather than on circle games in which only two children can play at a time.

We feel these meetings are successful in accomplishing the objectives for which they're planned. They stimulate teachers professionally, broaden their knowledge of physical education activities and demonstrate the best ways to teach these activities. They aid in orientating the new teacher and the shy, retiring one. Teachers work out these programs and activities co-operatively and feel pride and ownership in the presentation of them.

Finally, one of the most important results is that they give the participating teacher a chance to discover that physical education activities are pleasurable as well as developmental.

SUGGESTIONS CONCERNING METHODS OF INSTRUCTION IN HEALTH EDUCATION*

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Methods of Instruction

Use of Outlined Course of Study Materials

The suggested materials outlined in the course of study are intended as a guide for the teacher. In using these materials *flexibility* should be observed. Modifications should be made when they contribute merit to the outcomes of the course. In general, the outline should be considered as a basic framework, the supporting details of which should be supplied by the teacher and the pupils. At all times it should be considered as a means to an end, and not an end in itself. Its effectiveness, therefore, depends upon the way in which the teacher uses it.

* These materials were developed in collaboration with the Committee for Revision of the Pennsylvania State Course of Study in Health Education for Secondary Schools. The Committee was appointed by Dr. Haas, State Superintendent of Public Instruction. Mr. Foertsch later was chosen to serve as chairman of the sub-committee on Methods.

Planning

Planning is an essential procedure which is carried out before the learning activities take place. It is a mapping out or charting of the probable course of events. This involves such things as selection and organization of materials, adaptation of subject-matter and methods of procedure to meet pupil needs, abilities, and interests, and the arrangement of activities so that they will best fit the present experiences of the pupils as well as their probable future experiences. Its aim is to make the teaching-learning process more effective. Efficient planning is an important factor in successful teaching.

Planning as conceived here is concerned not only with the day-to-day preparation, but also with the larger aspects of the course as a whole. Thus at least three types of plans should be considered, (1) planning the course, (2) planning of the larger divisions or units of the course, and (3) planning for the daily work.

Course planning. The organization and arrangement of the materials in the course represent a plan. The scope of the course covers the needs of the secondary school in general. It should not be assumed, however, that the course as planned is final. Its application to specific school situations will undoubtedly require readjustments. This requires additional careful planning involving such factors as grade placement of materials, sequence of units, relative values of units, as well as time allotment for each unit.

In mapping out a course it is highly essential also to consider materials included in other related subjects. Optimum growth and development of pupils depends to a large extent upon the co-ordinated efforts of teachers. Each teacher or department, therefore, should correlate its work with that of other teachers in order to avoid unnecessary duplication or repetition. There should be no hesitation, however, to repeat where the work presents a new point of view or a new purpose.

Unit planning. In many instances health education lends itself to unit teaching. Plans for such teaching are not concerned so much with subject matter or divisions of the course, but rather in the organization of a series of pupil activities clustered around a central purpose. Such units may take the form of problems, projects, experiments, investigations and the like. A major unit of content, as illustrated in this course, may contribute to a number of units of work. A unit plan of this kind should have at least the following essentials:

(1) A clearly defined purpose easily understood by the pupils
(2) The subject matter and activities to be used
(3) The methods of procedure
(4) A list of the materials to be used
(5) An estimate of the probable outcomes

Lesson planning. In general the daily lesson plan is similar to the unit plan, except that it contains more detail and is developed for a specific instructional period. In reality it is a step in the direction of the completion of a unit. The lesson plan is a sketch showing the following essential elements:

(1) Introduction or approach to motivate
(2) The desired outcomes or objectives which guide the course of events
(3) The subject matter to be used
(4) The probable activities
(5) The probable methods
(6) The materials to be used
(7) The assignment

At all times the teacher should plan to assume the role of leader or guide, know in what direction the lesson is moving, provide rich pupil experiences, and make sure that the materials are at hand. Obviously, this differs quite radically from planning for mastery of subject matter. The teacher should also make ample provision for changes in plans as the lesson develops. Strict adherence to the lines laid down will lead only to a stilted and uninteresting lesson.

The assignment. Although the assignment is a part of the lesson it is so important that it warrants separate consideration. The assignment is not just something to be done by the pupils, but rather a plan designed to enrich pupil experiences through independent work. It requires as careful preparation as any other part of the lesson, and may be made not necessarily at the end of the lesson, but rather at the most appropriate time. It generally serves the purpose of introducing or preparing the pupil for a new unit of learning or it is used to bridge the gap between two lessons. In some cases also the assignment may be a unit of work extending over several lessons. Essential characteristics of a good assignment are as follows:

a. Introduction or approach to develop a favorable attitude
b. A definite and clear statement of the problem
c. The purpose
d. Method of attacking the problem
e. Where the materials may be secured
f. Analysis and organization of the materials
g. Application and generalization

Materials of Instruction and Their Uses

In the process of teaching, materials of instruction and methods go together. Each is a supplement to the other. Separated, they lose their functional significance. Materials serve as means to ends, while methods denote the way they are utilized to attain the desired ends.

Use of environment and experiences. The approach to a new learning situation must start with the environment in which the pupil lives, with the things with which he has already had experiences,

with the things he knows, does, and feels. This means in particular the concrete things which enter into the life of the pupil, material objects, persons, books, pictures, radio, nature, institutions, recreations, vacations, industries, and many others. These are the core materials for pupil growth. They are the points of departure for the interpretation of new facts, for the building of new attitudes, appreciations, and ideals, and for the development of new practices. Only to the extent to which these experiences are utilized will health instruction be effective.

Printed materials. The textbook is undoubtedly a valuable asset for health teaching. It is a ready source of organized materials to be used not for memorization of facts, but to stimulate thinking, to promote discussion, and for verification of facts and principles. A textbook should not be used as the sole means for instruction. It should be supplemented by other materials. When it does not fit the purposes other means should be used.

There is also great merit in using a number of textbooks written by different authors or supplementing the text with newspaper, magazine and other printed articles for the same topic. Different writers explain things in different ways, which gives greater clearness to abstract and difficult ideas. Printed matter with contrasting and even conflicting views should also be used. Pupils should discover disagreements and should become critical of what they read in print. The use of various sources helps to stimulate discussion and debates, and provides better opportunities for evaluating materials and forming principles. In addition, varied sources make possible differentiated assignments, based upon the abilities, needs, and interests of the pupils. However, under no circumstances should the textbook become the master. Library reference books, magazine articles, newspapers, pamphlets, and reports issued by government and private agencies should be made available and used extensively.

Visual aids. Visual aids are important in health education not only because they help to establish clear and accurate concepts, but also because they serve as effective motivating devices. When used at the appropriate time materials which appeal to the eye are more economical and more effective than verbal description.

Demonstration. The demonstration is an economical, concrete, and direct teaching device, and when used in a number of settings or positions and accompanied by appropriate explanation it is one of the most effective means of instruction. Many opportunities are presented in health education for the use of this type of visual aid.

Objects, specimens, and models. Ideas obtained from objects, specimens and models when coupled with everyday experiences furnish rich sources for learning and adequate understanding. In fact under certain conditions they are often better sources for learning than the original objects. This is particularly true when they can be taken apart, analyzed, and reassembled. Whenever their use can contribute to a clearer understanding of a problem they should be employed.

Field trips, excursions, etc. Field trips, trips to factories, to city plants, and inspection of heating and ventilation systems, etc., furnish excellent opportunities for first hand observation. To place pupils in direct contact with real things in natural settings, and to give them opportunities to observe, analyze, and discuss relationships under the guidance of the teacher is one of the finest ways of promoting pupil growth.

Pictures.

1) Still pictures. Many varieties of pictures such as photographs, cartoons, posters, sketches and lantern slides are available through many sources, and whenever they can add to meanings they should be used. It should be remembered, however, that pictures are substitutes for real things, and may be good or poor representations of the original objects. Hence care should be taken that the picture shows what it is intended to show. Its composition should not be confusing. It should be such that the focal point stands out so as to attract the eye, readily. It should be noted also that pictures may be used as excellent motivating devices when well selected and introduced at appropriate times.
2) Motion pictures. The motion picture when its content correlates closely with the topic under discussion is perhaps one of the best substitutes for real experiences. Its use however, should be carefully considered. It should not be shown as entertainment, nor should it be taken as a substitute for the teacher. If the picture is to have real value certain preparation is necessary. Following are some of the more important points to be observed:
   a) How the motion picture may be used.
      (1) To introduce a new topic or unit of work—as an overview of the work to be covered.
      (2) As a means of clarifying some important and difficult points already discussed.
      (3) As a review of a certain block of material already covered.
      Note: Frequently it is advisable to use the film for introductory purposes, and then repeat the showing for summary purposes at the conclusion of a unit of work.
   b) Preview. The teacher should observe the picture before it is shown to the pupils in order to determine its value, and to be able to better guide the pupils.

c) Procedures in the use of the content of the film.
   (1) The purpose of the showing of the film should be clearly defined. This should be coordinated with that of the topic or unit of work under discussion.
   (2) A brief overview emphasizing the important points to be observed is an essential phase in the preparation of the pupils to receive the film. This may or may not be accompanied by leading questions or assignments which are to be fulfilled after the showing.
   (3) Discussion and evaluation or test covering the content or completion of an assignment requiring additional study.

Charts, graphs, diagrams. These are symbolic representations which require interpretation. Many health education materials published in books, reports, pamphlets, magazines, and newspapers contain such materials. Since these occur so frequently in daily experiences ability to interpret them is very desirable. Here the teacher must be of aid. Wherever such materials are relevant in health teaching, analysis and interpretation carried on cooperatively by teacher and pupils is important.

Current health problems. Current health problems as reported in newspapers, magazines, and other publications, and over the radio are fertile fields for health instruction. Reading about such problems is real to the pupils. Analysis, discussion, and evaluation of such materials are important, especially when the problem is one of immediate concern to the community. Such problems encourage pupils to make use of their immediate environment and stimulates continuous readjustments.

Radio. The possibilities of the use of the radio both at home and in the school as a means of attaining desirable health outcomes should not be overlooked. Radio programs today are full of pertinent health materials, both good and bad. Discussions of broadcasting and critical evaluation of the things heard are excellent means for attaining health goals.

Pupil notebooks. The notebook should be an aid in learning. Its purpose is to record ideas and thoughts in an organized way to be available for future use. Most of what goes into notebooks should be the ideas of the pupils expressed in their own way. Copying detailed teacher-organized materials from the blackboard or dictated notes, or reproducing printed materials from books and other sources cannot be justified. What goes into notebooks should be mainly the products of the pupils.

Use of pupil notebooks by teachers for instructional purposes is often desirable. If upon inspection the same glaring errors occur in many notebooks the indication is one of remedial teaching. This is good practice. If, however, inspection is used solely as a means of securing ratings the practice is not so good.

Workbooks. Workbooks and guide sheets may be valuable aids if rightly used, but at all times they should be considered as supplementary and not dominate the instructional period. Very few if any workbooks will be found to parallel a course of study in health education. Teachers, however, may use certain sections of advantage. Often teacher-made guide sheets may be used with considerable success.

Blackboard. The blackboard is a highly desirable teaching instrument. It is perhaps one of the most flexible and most resourceful devices the school had for conveying ideas and thoughts, yet frequently it is the most neglected. It should be used extensively by the teacher not only for vocabulary and outline purposes, but also as a visual aid. The possibilities for making sketches, drawings, charts, graphs, and diagrams as means of clarifying ideas and concepts should not be overlooked. Exceptional drawing ability is not an essential. A few scratched lines will often convey more than written or spoken words.

Supplementary Health Education Aids

The effectiveness of the health education program depends not only upon what is taught in the classroom, but also upon well planned activities in all phases of school life. Many of the experiences outside of the classroom often have more dynamic and practical health education values than the course of study. Providing opportunities for pupils to do some purposeful health planning with respect to their school environment and their own practices is both practical and essential in a health education program.

Assembly programs. An assembly health program which grows out of school or community needs is one of the most effective means not only for reinforcing health concepts, but more particularly for developing a social health consciousness. When pupils participate in such programs, share common information, make appeals for improvement, report findings, and introduce outside speakers the assembly program becomes a most helpful adjunct to health teaching.

Health council. The school health program should make use of every opportunity to capitalize the social characteristics of the pupils as a means of attaining health goals. Pupils should participate in the shaping of the health program not only for individual improvement, but also for the good of the whole school. A school "Health Council" composed of pupil representatives as well as members of the teacher, health service, and custodial staffs is an excellent means of promoting socialized health

experiences. Pupil participation in the formulation and expression of school health policies through an officially recognized body not only promotes a sense of civic responsibilities, but also attaches significance to the health program.

School publications. School newspapers, as well as other school publications, provide desirable socializing experiences in which health problems may become important centers of interest. Provision for a health section in the school newspaper where pupils are given opportunities to express health interests often carries more weight than classroom instruction. The influence of such news may even extend into the home and community. The importance of the school newspaper in the development of the health program should not be overlooked.

School health museum. Museums containing collections of specimens, models, and other visual materials have a very definite place in the educational procedure of the school. In these museums space should be provided for the display of health materials. In some cases such museums may consist entirely of health materials, and may be exhibited in the library, school corridor or classroom. The values of these materials depend upon a number of important factors. Mere collections of unrelated objects have but little significance. The objects displayed should be related to the units of instruction. Often the work involved in collecting the materials and their organization by pupils produces better results than mere viewing of the materials. Such materials should also give further insight in common problems arising in the course of instruction. Furthermore, the objects displayed should tell a story. In other words, the exhibit should represent a series of related objects showing a developmental sequence. Thus it will serve a functional purpose. A display should not be allowed to remain as a dust catcher. When it has served its purpose it should be replaced by new material.

Bulletin boards. The bulletin board for displaying health education materials in the class room, school corridors, and other places in the school should be used extensively as a supplementary aid. In general, the use of the bulletin board, and the collection and organization of materials follow the principles already mentioned for the school health museum.

Evaluation

Evaluation in the health program is not something that takes place at the conclusion of a unit of instruction or at the end of a lesson. It is a process which goes on all the time. It takes in the total behavior of the child and cannot, therefore, be based upon objective measurement only. Subjective measures must also be included. In such appraisal, all available instruments and procedures must be used.

Worthwhile evaluation is based upon the fundamental principle that it is a cooperative enterprise. It is worthless unless the person evaluated knows its purpose. There must be common agreement as to whether or not progress has been made. Further, in its application, evaluation does not measure a single item. It must take into consideration all related factors.

Objective measurements.

a. *Tests.*

The use of objective tests in health education is a legitimate and essential part of the process of evaluation. Tests, however, are not just instruments to be used periodically to determine "marks." Fundamentally, tests should serve as guides for both pupils and teachers. The principal functions of tests may be listed as follows:

1) Diagnostic—with respect to new work about to be taught and also with regard to work already covered.
2) To determine the achievement of the individual pupil as well as that of the class.
3) To find learning difficulties of the pupils and the class, and to apply remedial measures.
4) To improve methods of instruction.
5) To stimulate the work of the pupils.

There are a number of different kinds of objective tests which may be used. In health education the most readily adaptable tests are the

1) true-false
2) multiple choice (or best answer)
3) matching
4) completion
5) identification (in connection with diagrams of anatomical structure)

Published test forms in health education are available, but they are not always applicable for particular courses. Instead, therefore, many teachers have devised their own forms with considerable success. In setting up such forms it is important to bear in mind at least the following criteria:

1) The test should measure what it is supposed to measure. The items in the test must be in agreement with the course materials. Extraneous matters should be eliminated.
2) The test should be sufficiently difficult to prevent perfect scores. On the other hand, it should not yield any zero scores. The test items should be of varying degrees of difficulty.
3) As far as possible subjective elements should be eliminated. In other words, objectivity should be maintained.
4) The test should be comprehensive. It should include all of the materials in the unit it is supposed to cover. Duplication of questions should be avoided.

5) The test should be easily administered, and should be economical in the time and effort expended by both pupils and teacher.
6) The test should be a pleasant task for the pupils, not distasteful. They should be interested in the test, and should feel that it is reasonable and has practical value.

b. *Other objective measures.*

It should be remembered that in addition to written tests there exist other means for obtaining objective measures in health education. Skills, demonstrated by pupils in first aid, safety, and other phases of health work furnish valuable objective evidence. Medical records of pupils, including those of the school physician as well as the evidence of the family physician should also be taken into account in measuring the health program.

Observational records. Evaluation does not stop with the things which can be measured objectively. It includes also many subjective elements. Unbiased observation of changes in individuals, consistent practices and reactions, and many other similar factors when recorded systematically form an indispensable part of evaluation. Anecdotal records are also valuable in this connection. Such procedure amounts to case studies. When evidence concerning individuals is collected from various sources such as the teachers, the school physician, the school nurse, the school counselor, the principal of the school, and also from parents it become highly significant, especially where the same traits and patterns of behavior are recorded repeatedly. Evidence of this kind possesses a high degree of reliability, and forms a significant part of the health evaluation of pupils.

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THE PHYSICAL EDUCATION MAJOR STUDENT'S RESPONSIBILITY AND CONTRIBUTION TO THE PRESENT CRISIS*

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The major students of Physical Education today have a responsibility in developing themselves to be not only prepared to carry on a program of physical fitness training but also are responsible for being able to provide the more complete education of the individual through physical education. Regardless of the change of emphasis in our physical education activities the teacher of physical education is still responsible for the physically, mentally and socially integrated and effective individual.

An acceptable aim of physical education states that physical education aims, "to provide skilled leadership and adequate facilities that will afford

* Presented at the Student Panel of The National War Fitness Conference of The A. A. H. P. E. & R. at Cincinnati, April 1943.

an opportunity for the individual or group to act in situations which are physically wholesome, mentally stimulating and satisfying, and socially sound."[1] The basic philosophy of this aim still holds true today, even in our wartime emergency.

However, with the tendency for the school to adopt a program of activities which will develop the youth of today fit for service in the armed forces there is danger of losing sight of the fact that the individual is still in need of a well-rounded program both for fitness for war and fitness during peace.

Granted that the activities in general must be of a more strenuous nature the fact remains that fundamental skills are also vital to the fully equipped fighting man.

Build endurance with distance running? YES! Increase organic power with vigorous games and exercises? YES! Increase arm and shoulder strength with chinning and dipping? YES!

BUT—

Do not neglect speed, agility, flexibility, coordination, leadership, and the development of powers of strategy.

Develop those hand-eye coordinations. Hand grenades are still effective weapons of war.

Improve agility and nimbleness of foot. Has hand to hand fighting become so obsolete in this mechanized war?

Teach the boys to tumble and fall with safety. Parachute troops don't land on feather beds. Diving into a foxhole with full pack and rifle isn't exactly a bed of roses.

Improve the sense of balance, poise and ability to think in trying situations. Develop team strategy. These qualities are always in demand when the chips are down whether it be on the football field or on the battle front.

In war or in peace the required physical and mental qualities of the individual are not so much different in kind but rather in amount or degree of development. Our kinesiology will show us that every boy has the same number of muscles (such as the triceps and biceps, etc.), but that the degree to which each is developed is quite another matter.

Boys and girls will always need varying amounts of strength, endurance, speed, agility, poise and mental balance to live happily and successfully in our complex world full of strains, drains, trials and tribulations, even in a normal every day life. Now that we are at war these same qualities are necessary to win that war but in order to assure that we win it we need them in a much greater degree.

If we would pause but for a moment we could see that even in an all-out effort emphasis on only the physical aspects of development would certainly spell disaster. War or no war the individual is still an organismic unity and must be treated as such.

Therefore, as majors in the field of Physical Education, we still have the responsibility of carrying out our accepted philosophy by developing the mental *and* the social aspects of the individual as well as the physical.

Keep our boys so integrated and effective that we may preserve those qualities of leadership and initiative in addition to skill, endurance and strength, which all go to make the American soldier the best fighting man in the world today.

[1] Williams, Jesse F., *The Principles of Physical Education*. W. B. Saunders Company, New York, 1942. p. 250.

IN MEMORIAM

PAUL M. KRIMMEL—1890-1943

In the untimely passing of Paul M. Krimmel, physical education lost one of its hardest workers and firmest believers in the educational contributions of our profession. His death occurred on February 8 and was due to a sudden heart attack.

Believing intensely in the fundamental values of gymnastics, he was himself an accomplished gymnast, winning many honors in this field. In 1911 and again in 1912, he won the National A.A.U. All-Round Gymnastic Championships. A member of the Syracuse Turn Verein for over a quarter of a century, he was active to the end. His interest and sincere belief in this phase of physical education were reflected strongly in the school programs he directed; his contributions to the practical aspects of physical education have been felt throughout the country.

A graduate of the American Gymnastic Union, Indianapolis, Mr. Krimmel was the first teacher of physical education in the public schools of Syracuse, twenty-six years ago. From that beginning, he developed physical education in this city until it now reaches every boy and girl in the schools. He was the founder and director of the Syracuse High School Athletic Leagues, which foster many types of athletic competition in both the public and parochial schools of the city. More recently, he was appointed director of the physical fitness program of the Syracuse-Onondaga County War Council.

His professional interests and activities were far-reaching. For two years, he was President of the New York State Association for Health, Physical Education, and Recreation. He was a member of past Legislative Councils of both the Eastern District Society and the American Association for Health, Physical Education, and Recreation. Chair-

man and member of many professional committees, he gave unstintingly of his time and effort for the promotion and betterment of physical education in the state and nation. He was a very active member of Phi Epsilon Kappa, physical education fraternity. Recently, his alma mater paid tribute to his professional career by presenting him with an honorary degree.

Those who knew Paul Krimmel respected and admired him for his great personal integrity and loyalty and for the qualities of dynamic leadership which he possessed. His many friends and coworkers will grieve deeply over his departure.—Prepared by *H. Harrison Clarke,* Syracuse University, for the Syracuse Alumni Chapter of Phi Epsilon Kappa.

WHAT PROGRAM OF ACTIVITIES ARE ESSENTIAL TO INTRAMURAL ATHLETICS CONCERNED WITH THE WAR EFFORT

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"Our youth, today, is growing weaker and lazier than ever." This statement, made by John B. Kelly, director of the United States Division of Physical Fitness, is based upon statistics compiled from the examination of men called to our armed forces.

The importance of good health, and prime physical condition during peace times needs no explanation here. In times like these, the need for strong, healthy individuals is urgent. That any or all means available should be used to help put the youth of our nation in good physical condition at this time is not to be questioned.

The steps already taken by some of our colleges and universities in broadening or intensifying their physical education programs, and those contemplated by others would indicate rather clearly that these institutions believe physical education can make definite contributions to the improvement of the students' physical condition during this present emergency.

Through the broadening of the physical education program—in which all able-bodied men would be required to take part in a program of vigorous activities, for an increased number of times per week, much could be done to improve their physical condition. For those men entering the armed forces this would mean a shortening of their training period and a saving of time; for industry it would mean a better, faster job, again a saving of time—and time as well as man power is of utmost importance now.

Intramural athletics, being a phase of a well-organized physical education program, should and can make contributions during this emergency. Just what intramural activities and contributions are essential during this all-out war effort is an interesting question.

Intramurals, as some of us have understood them, were conducted in order to give those individuals who know how to play an opportunity to enter into enjoyable competition of their own free will.

With the increased interest in and the demands upon intramurals at this time, two possible alternatives present themselves.

The first alternative is to use intramurals as a means of improving the students' physical condition by increased participation in the more vigorous activities.

If the intramural program is to be set up with physical conditioning its one goal, then the selection of activities to be used will narrow itself down to those considered vigorous and for which facilities and equipment are available.

Activities such as soccer, speedball, basketball, touch football, handball, cross country, boxing and wrestling, to mention some of the more strenuous types, would no doubt, if made available to more players over longer periods, be at least a factor in the improvement or maintenance of the physical condition of the participants.

There are certain values other than physical which accrue from participation in these more rugged team and individual activities that are in themselves highly valuable though intangible. Courage, emotional stability, stick-to-itiveness, and team play are types of these intangibles.

In such an intramural program, definite protective measures should be taken to safeguard the players. A thorough physical examination would be necessary if the periods of play are to be lengthened. The period of training should be extended, more time and space set aside for the use of the team members, in order to condition them to withstand more frequent and longer playing periods.

If interscholastic and intercollegiate athletic programs are reduced, then there is hope that some additional time and playing space may be allocated to intramurals, thus making it possible to attract more players into these activities.

If intramurals are to be expanded with the improvement of physical condition as a goal are adequate facilities available? Fortunately, many

of our vigorous team activities are designed for outdoor play; and most institutions have a great deal more space for outdoor than they have for indoor activities. On the other hand, such an out-of-door program is directly dependent upon the weather and amount of daylight.

It is a question, however, whether an intramural program based only upon the vigorous sports would draw more individuals into participation or whether it would merely intensify the activity life of those already interested in these activities, and exclude those who had, because of their interests and abilities, learned some of the less vigorous activities.

The second alternative is to use intramurals as a means of offering more individuals an opportunity to perfect skills and develop interests in physical activities, in order that they may more readily adjust themselves to present, as well as future, recreational needs and interests. This alternative refers to the recreative, therapeutic, stress-relieving, emotional-balance approach.

This type of broadening or intensifying of the program does not exclude any type of activity. It does not stress improvement of physical condition. In this set-up, whatever physical conditioning takes place in the individual is purely a by-product, derived from enjoyable participation. The fun of playing, the relieving of tension, the development of skills for use now as well as in later life, the socialization, and perhaps even the reward of winning are the outcomes that may be expected.

Physical fitness is important to everyone at all times—in peace, so that they may better enjoy life, and in times like these, so that the task to be done can be done more thoroughly and more quickly, in order that once again we may enjoy the American way of living.

In wartime, recreation is also of vital importance. The men in the various branches of our army and navy, particularly during the first months of their training, will find the knowledge of some recreational skill or skills invaluable. Those in charge of our armed forces recognize the value of such activities as a part of camp life. For the thousands in the highly geared industries—recreation is equally essential.

The program of intramural activities that offers a wide variety of activities fills a very definite need for that small percentage of our youth reaching our college and universities. It gives them an opportunity to try out some of the usable recreational skills —skills for which space and facilities are being provided by communities, training centers, service organizations, and industry.

A broad, well-directed program of intramural activities in our high school would answer an even greater need. For a program of this kind would generally offer the only opportunity for recreational competition these youngsters would have before assuming their place in adult life.

In our colleges and universities, with the educational process running at higher speed in order to shorten the time element, the need for recreation has also been greatly increased. If the physical education class program is to be expanded in order to accelerate the conditioning of the students, then the intramural program should be broadened in order to increase its specific recreative contributions.

The gigantic task ahead of us, with all its problems, is crowded with hard work, hardships, and heartbreaks. It is not unreasonable to believe that intramurals, whether carried on in schools, training centers, or industrial plants, can do their part in all this by providing adequate opportunity for participation in enjoyable recreational competition.

To base our intramural program only upon the improvement of the physical condition of those who participate seems, in part at least, to defeat the real purpose of intramurals.

If adequate emphasis had been placed upon the physical education programs in our high schools, colleges and universities during the past twenty odd years since the first World War, the problem of improving the physical condition of our youth would not be so great as it is today. Such lack of foresight led in part to the situation referred to by Mr. Kelley's generalization.

Whatever expansion is made during this emergency in our physical education and intramural programs in order to speed up the conditioning process, whether physical or mental, is justifiable if well done. This expansion, however, should be made not only with the demands of this emergency in mind, but with the demands of the years which will follow victory and peace. The great problems of readjustment will place a premium not only upon good physical condition but upon the knowledge of recreational skills as well.

Considering these two alternatives, it would seem that such expansion of intramurals athletic programs as is desirable and necessary now, can and should be made without again requiring complete or drastic reorganization after peace has been established.

The improvement of physical condition, the teaching of sport skills can be done more effectively in well-conducted physical education classes and varsity sport squads. The present emphasis in intramurals, therefore, should not be placed entirely upon the more vigorous types of activities. The greatly needed recreational, stress-reducing therapy of organized play should remain the chief contribution of the intramural program.

BOOK REVIEWS

Ainsworth, Dorothy, and Staff. *Individual Sports for Women.* (W. B. Saunders Company, Philadelphia, 1943. 392 p. $3.50.)

The place of individual sports for women, and for men, in the currently intensified program is defended on the basis of their contribution to (1) physical well being, (2) individual adjustment, and (3) social adaptability and usefulness.

Organizational and instructional problems involve (1) lack of teachers skilled in these sports and also trained to teach, (2) credit for participation only has been necessary at times. Properly sized classes, graded skills, classified students, supervision of competition, and ordering and keeping up equipment are other problems involved.

Introductory remarks, equipment and playing area, conduct of classes, outlined teaching plans, and the basic techniques are given for each of the following sports: archery, badminton, fencing, golf, riding, swimming, tennis, and bowling. Methods of conducting tournaments are also explained.

The text is splendid for individual use but better for class instruction. One outstanding feature is the profuse use of splendid illustrations for each sport. While intended for women, the corecreational use of these activities is justifiably stressed, hence the book would be of service to men instructors as well. Excellent references are selected for each sport.

Every department should have copies of this book in its library and students should be encouraged to read it as a partial fulfillment of class requirements.

KARL W. BOOKWALTER.

Blanchard, Vaughn S. *Problems in Health and Physical Education.* (A. S. Barnes and Company, New York, 1942. 128 p. $1.50.)

The author is the successful director of a department of health and physical education which has made an outstanding contribution to course of study making in this field.

Significant problems confronting the curriculum worker are discussed. The influence of society and school problems upon children is shown. The influences of aims and objectives upon health and physical education curricula are shown. Guiding principles in curriculum construction are outlined. Help is given in unit construction of physical education curricula. Emphasis is placed upon teacher participation in curricular efforts and future trends in the health and physical education field are suggested.

This small guide should be readily available to every course of study committee working in the health and physical education field and should be equally valuable as a text in courses dealing with curriculum making in this field.

KARL W. BOOKWALTER.

Federal Security Agency, U. S. Office of Education, *Physical Fitness Through Physical Education,* for the Victory Corps. (U. S. Government Printing Office, Washington, 1942. 102 p. 25 cents.)

Prepared by the Committee on Wartime Physical Education for High Schools, Jackson Sharman, chairman, this manual expresses in its title the sound philosophy behind it.

A statement is made of the need of a physical fitness program for the boys and girls of every school and the purposes of such a program. The essential procedures such as selection of pupils, provision of time, teacher, and facilities are outlined. The school administrators as well as the teachers are charged with the adaptation of the physical fitness programs to the present situation. An appropriate apportionment of time is suggested for daily classes.

Methods and procedures essential to effective instruction are outlined. Much stress is placed upon an adequate health examination which is outlined. Activities for boys and girls are separately suggested and objectives stated for each type. Pictures and drawings exemplify the descriptions of activities.

Tests suitable for the determination of results and standards for their evaluation are carefully selected and described. Means of providing for individual differences by classification are included.

The contribution to physical fitness, of the related phases of the school health and physical education program, is the concluding chapter and a carefully selected bibliography and diagrams of obstacle course units and other equipment follow in the appendix.

A very helpful manual for aiding in the new emphasis. Every director of a physical fitness program should have a copy.

KARL W. BOOKWALTER.

Salt, E. Benton; Fox, Grace I; Douthett, Elsie M.; and Stevens, B. K. *Teaching Physical Education in the Elementary School.* (A. S. Barnes and Company, 1942. 340 p. $2.00.)

A source book of activities, methods, and procedures to aid the classroom teacher to assume responsibility for teaching physical education. A brief statement of philosophy orients the reader to the place of physical education in the elementary school program.

The problems of organization are considered in one chapter and detailed guidance in planning

instruction for the day, week, or year is given in the following chapter.

The activities seem to be quite well selected for the grades indicated and diagrams clarify descriptions frequently. Music accompanies the rhythmical activities and stunts and classroom games are well written.

The book should prove to be a rather complete single source for the untrained teacher of elementary school physical education.

KARL W. BOOKWALTER.

Steinhaus, Arthur H.; Hawkins, Alma M.; Giauque, Charles D., and Thomas, Edward C. *How to Keep Fit and Like It.* (Chicago: George Williams College, published by Consolidated Book Publishers, Inc., 1943. pp. 64.)

This profusely illustrated manual on physical fitness is a readable booklet concerning the attainment of higher physical efficiency through relaxation, exercise, medical care, nutrition, rest, and recreation.

The language is simple. The statements are based upon scientific evidence and the result of pooled thinking and experience of research, administrative, and instructional workers in the fields of health and physical education. The booklet abounds in hundreds of practical ways to "keep fit and like it."

KARL W. BOOKWALTER.